

# The Archaeology of Afghanistan

from earliest times  
to the Timurid period



Edited by

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# Preface

In producing this book we owe thanks to many, and apologies to a few. Our thanks are due to all those scholars, and their publishers, who have freely allowed us to use illustrations: they are listed below, but should any due acknowledgement have been inadvertently omitted we shall include it in the next printing of this book. We thank especially Josephine Powell for providing not only permission but her own excellent prints, and Len Morley for making many of the other prints for us. The maps in Chapter 1 were redrawn from the acknowledged sources by Michael Walton, and many of the line illustrations were also redrawn by staff artists at Academic Press, where Jane Duncan dealt with all problems with welcome sanity.

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As editors we owe our authors an apology for insisting that a culture-historical rather than a processual approach should be employed. Neither of us is opposed to the latter, but in presenting for the first time a synthesis of a region's archaeology we felt that maximum attention should be given to the presentation of basic information. Had the book been of limitless length we should have included with pleasure a processual discussion in each chapter: as it was, we were forced to cut heavily the length of some chapters.

## Acknowledgements

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*September 1978*

*Raymond Allchin  
Norman Hammond*

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# Recent Discoveries

It is inevitable that, in spite of the speed and efficiency of the publishers and printers, a book of this kind must take many months to produce. Regrettably international postal services and overworked scholars do not always match such speed or efficiency! It is a sign of the times that during the interval that has elapsed between the submission of manuscripts and the appearance of the finished volume many important discoveries should have been made, and many new contributions published. Here we record briefly some of the outstanding discoveries.

In the field of later prehistory the most remarkable discovery has been the mound at Shortugai, on the east bank of the Oxus river, some 20 km northeast of Ai Khanum. This site was already referred to in passing in our concluding chapter (p. 408). Continuing exploration and now excavation by the French Archaeological Delegation have clearly substantiated the first impression that it marks a colony or trading outpost of the Harappan civilization. A preliminary report of the discovery has appeared to date (Lyonnet, 1977). It is understood that a report on the first two seasons' excavations is shortly expected. There appear to be two main periods of occupation. The first would seem to have seen the establishment of a colony by the Harappans, and finds of gold and large quantities of lapis lazuli (the site is within a reasonable distance of the quarries of Badakshan), suggest the purpose of the colony to have been for trade or gathering of raw materials. The discovery of a Harappan seal with engraved rhinoceros and an inscription, albeit from a later layer, seems to reinforce the trading aspect. The second period of occupation is marked by new styles of material culture and plain pottery, together with an element showing continuing influence from the preceding period. This must belong to the early second millennium. The implications of this discovery are quite remarkable. Although Shortugai lies only some 500 miles northwest of Harappa, as the crow flies, the journey involves crossing the heights of the Hindu Kush and passing through several hundred miles of mountainous terrain. The establishment of a colony at the end of such a journey, in an area hitherto without evidence of other Indian contacts at this date, must be unprecedented in the third millennium.

For the beginnings of history two developments deserve mention. First, the appearance of the report on the American excavations at Nad-i Ali, Sorkh Dagħ in 1968 (Dales, 1977). This is important because it confirms the views of the earlier excavator, R. Ghirshman, that the foundation of the city, and construction of the great citadel mound, belong to a pre-Achaemenid, perhaps Median, period. Interesting support for this view comes from the continuing work at Kandahar (McNicoll, 1978; Whitehouse, 1978), where the British Institute's excavations, directed by Dr Svend Helms, (Helms, in press), indicate that not only the massive citadel mound, but also almost the entire plan of the defences around the old city

belong to a similarly early date. Perhaps the most dramatic discovery of the 1977-78 season at Kandahar was a fragmentary clay tablet with a cuneiform inscription, reported to be Elamite of probably Achaemenid date.

The French excavations at Ai Khanum continue to yield surprises. During the past two seasons the excavation of the theatre has been completed. Here for the first time in Afghanistan is a large Greek theatre, built on more or less traditional lines and estimated to be capable of accommodating an audience of several thousand. Equally exciting is the excavation of a storeroom or "treasury" containing a great weight of lapis lazuli and other semi precious stones. This must testify to the continuing trade in lapis, two thousand years after the establishment of the Harappan colony at Shortugai. A third important new discovery is of fragments of Greek manuscript. Further information is eagerly awaited.

The growing international interest in Afghanistan is apparent from the number of new publications, too numerous to list, which have appeared during the past two years; and from the welcome appearance of an *Afghanistan Journal*, published in Graz, Austria. We welcome too the first number of the new British periodical, *Afghan Studies*.

Among other publications we welcome the long awaited appearance of Schlumberger's report of the French excavations at Lashkari Bazar (MDAFA, 1978), and look forward to further publications of the French Archaeological Delegation which we understand are now in press. Also welcome as a background work is *A Historical Atlas of South Asia* (ed. J. E. Schwartzberg, University of Chicago Press, 1978).

Continuing work in adjacent countries has produced further important discoveries. From Tajikistan comes news of fundamental research in palaeolithic archaeology. Here Ranov and his colleagues have made valuable advances in the archaeology and palaeogeography of the Middle and Upper Palaeolithic (A. E. Dodonov and V. A. Ranov, 1978; V. A. Ranov, 1977). The report of the excavation of cemeteries of the second millennium B.C. in Uzbekistan (A. Askarov, 1977), and of other discoveries including seeds of Indus type from Altyn-depe (V. M. Masson, 1976, 1977) also deserves mention. From Iran there is a tide of new discoveries; among them the continuing excavations of the Italian team at Shahr-i Sokhta have great relevance for southern and western Afghanistan during the fourth and third millennia, and are producing comprehensive data on many aspects of the life and economy of those areas. From Pakistan the most important discoveries are those of the French Archaeological Mission at Mehrgarh, at the head of the Kachi plain near the outlet of the Bolan pass. Here there is evidence of an apparently unbroken sequence of occupation from very early times down to the second half of the third millennium. The settlement appears to have been of considerable extent. There is a deep deposit of non-ceramic neolithic occupation, ending c. 5000 B.C., in a period in which mud brick structures were made and burials included beads of turquoise, apparently imported from Central Asia. In the second to fourth periods the use of pottery became established, and the sequence shows close parallels with those of the Quetta valley and Mundigak. Also relevant for the later prehistory of Afghanistan are the current excavations at Rehman Dheri in the Dera Ismail Khan district, by a team from Peshawar University. Here a regularly planned, walled town of the mid-fourth to early third millennium has been discovered, belonging therefore to the formative stage of the Indus civilization.



# References

- Askarov, A. 1977. *Drevnezemledelcheskaya Kultura Epokhi Bronzi yuge Uzbekistana*. Tashkent.
- Dales, G. F., 1977. *New Excavations at Nad-i Ali (Sorkh Dagb) Afghanistan*. Berkeley, California.
- Dodonov, A. E. & Ranov, V. A. 1978. I primi insediamenti umani. *Enciclopedia della Scienza e della Tecnica Mondadori*. Rome.
- Helms, S. V., in press. The British Excavations at Old Kandahar: Preliminary Report of the work of 1977. *Afghan Studies*, vol. 2.
- Lyonnet, B. 1977. Decouverte de sites l'age du bronze dans le N.E. de l'Afghanistan: leurs rapports avec la civilisation de L'Indus. *Annali dell' Istituto Oriental di Napoli*. 37. Naples.
- Masson, V. M. ed. 1976. *Baktriyiskie Drevnosti*. Leningrad.
- Masson, V. M. 1977. Pechati protoindickovo tipa iz Altyn-depe. *Vestnik Drevnei Istori*, No. 4, 147-156.
- McNicoll, A. 1978. Excavations at Kandahar, 1975. *Afghan Studies*, vol. 1.
- Ranov, V. A. 1977. *Paleoekologiya drevnego Celoveka*. Moscow.
- Schlumberger, D. et al. 1978. Lashkari Bazar. Une residence royale ghaznévide et ghoride. I A, *L'architecture*. Paris.
- Whitehouse, D. B. 1978. Excavations at Kandahar, 1974. *Afghan Studies*, vol. 1.



# Introduction

*Norman Hammond and Raymond Allchin*

Afghanistan is a political rather than a geographical entity, formed by the competing imperialisms of Russia and Britain in the latter part of the eighteenth and nineteenth centuries and by the far-sighted ambition of the Durrani dynasty, who ensured that Afghanistan survived as an entity and was not simply absorbed between the two larger empires (Dupree, 1973). Afghanistan has well been called the cross-roads of Asia, in that it is bounded on the south and east by the Indian sub-continent, on the west by the deserts and plateaux of Iran, and on the north by the great inland drainage basins of Central Asia, of the Oxus (Amu-darya) and the Jaxartes (Syr-darya). Throughout the known past these three major cultural areas have nourished their own traditions, civilizations arising and declining at different times in each of them, and through Afghanistan has passed much of the cultural and commercial traffic between these areas and more distantly between China, India, the Persian Gulf and the Mediterranean world. Afghanistan has been both a meeting place and the melting pot of cultural influences from which it has evolved throughout history its own highly distinctive cultural contribution to civilization. The broad geographical and cultural region of which Afghanistan forms the heart stretches from the Oxus to the Indus, and yet within the bounds of the modern state there is marked diversity both of physical and of human geography, with mountains, deserts and fertile valleys closely juxtaposed.

Surprisingly there has never been a book primarily concerned with the archaeology of Afghanistan, although two recent publications by Masson and Romodin (1964) and Dupree (1973) have utilized much archaeological evidence within more general historical accounts. The former of these at least is not easily available to an English reading audience and neither can be said to perform the function of a basic introduction to the archaeology of Afghanistan for the English reader, one which we hope that this book will fulfil. Since the Second World War there has been an increase in international interest in Afghanistan and this has found expression in the growing number of countries who have sent archaeological expeditions and missions to work in the country. All of this means that the time is now ripe to present a synthesis of both earlier and recent work; one might almost say that for the first time there is more cheese than holes! There has also been an increase in interest within Afghanistan itself and we hope that this book, although the product of foreign scholarship, will prove useful and acceptable to the Afghan people. With the increase in archaeological knowledge of the high cultures of India, Iran and Central Asia the region of Afghanistan, peripheral to each of these yet central to all three, has become more important and knowledge of its archaeology vital to a study of any of them.

## Choice of approach and structure of the book

This book is both collaborative and international in its authorship because archaeological work in Afghanistan over the past three decades has been truly international in scope. In view of the time span, the range of cultural complexity, and the newness of much of the research here reported, it seemed desirable to choose authors who were immediately acquainted with the various regions and periods of the archaeology of Afghanistan rather than to rely on a necessarily more secondhand synthesis by one or two people. The contributors to this book come from both Europe and America and all have carried out field work in Afghanistan within the past few years. Several have major research programmes there in progress and all are outstanding authorities in their fields, which often range far beyond the boundaries of Afghanistan itself. By making this work collaborative we have been able to obtain a much greater degree of local expertise than would have been otherwise possible and each chapter places its period of Afghan archaeology within a broader South Asian and Central Asian context in a way that would be difficult for a single author to comprehend while using the most up-to-date information. Similarly the editors have both carried out archaeological field work in Afghanistan, although their major efforts have lain elsewhere, and both have been involved in the archaeology of Afghanistan for many years.

As editors we have interfered as little as possible with the texts of our co-authors, apart from the modifications necessary to weld their separate contributions into a coherent whole. Nor have we sought uniformity of English style. The basic organization of the book is chronological but naturally the subject matter varies very much from the prehistoric through into the historic period. The geographical background to Afghan prehistory and history is described in the first chapter in both physical and human terms by Sophia Bowlby. This is followed by chapters dealing chronologically with each of the major periods of prehistory and history. Chapter 2 by Richard S. Davis gives an account of the earliest known inhabitants, and deals with the last major geomorphological changes at the end of the final glaciation. There is thematic continuity between this chapter and the next by Jim G. Shaffer, who opens with a discussion of the final stage of the Stone Age and the prelude to settled agricultural production in this part of the world. This chapter embraces the rest of Afghan prehistory down to the comparatively little known second millennium and early Iron Age. Recorded history begins with the Achaemenid conquests of the sixth century B.C. Chapters 4 and 5 are the joint work of David MacDowall and Maurizio Taddei, the former dealing with the evidence of inscriptions and numismatics, and supplying a short historical introduction, and the latter dealing with the evidence of settlements, architecture and art history. Chapter 4 covers the centuries between the Achaemenid conquest and the arrival in the last two centuries B.C. of the nomadic Yueh-Chi in the north. It includes therefore the campaigns of Alexander the Great and the subsequent Greek kingdoms in Bactria and Kabul. Chapter 5 begins with the rise of the Kushan empire and continues through the successor dynasties to the Hephthalites and the Turks, and the Arab invasions which heralded the start of Muslim rule in Afghanistan. This chapter includes therefore reference to the caves at Bamiyan and allied monuments. The archaeology of the Muslim period is dealt with in Chapters 6 and 7 by Klaus Fischer. The first

opens with the Arab invasions and covers the centuries up to the Mongol invasions, including the Ghaznavid and Ghorid dynasties; and the latter deals with the dynasties who succeeded the Mongols, down to the Timurids. Each lays stress on the discoveries and study of monumental remains which have hitherto formed a major aspect of the archaeology of this period in Afghanistan, but includes also notice of the other principal categories of evidence. The short historical introductions which preface these chapters were kindly supplied at short notice by Peter Jackson, Fellow of Churchill College Cambridge, during Professor Fischer's temporary indisposition.

Within the wide scope of the book we have tried to make the emphasis archaeological rather than historical. We are all too conscious of the resultant gap between the archaeological accounts of the historical period, and full historical and archaeological synthesis of the kind so brilliantly achieved by Ghirshman in his works on Iran and Afghanistan. Our justification, if indeed justification be required, must be that we are presenting so much new material that to have included this sort of synthesis must have greatly extended the length of this already considerable volume. For the reader who wishes to have further reference to the history we recommend him to consult the bibliographies of such works as Fraser-Tytler (1967), Masson and Romodin (1964), Dupree (1973), and more generally in the accounts of the history of Afghanistan in the *Encyclopaedia of Islam* and incidentally in the *Cambridge History of Iran*.

As editors we have attempted, within reason, to adopt a single system of transliteration for all our authors, but we are aware that inconsistencies still occur. Where several spellings of a name or place name are current, we have sometimes allowed different forms, but we are conscious that in many instances where we have tried to be consistent we shall offend some by our choice of one form or another. As far as possible we have omitted diacritical marks, even if regretfully. We have evolved and applied our own system of conventions rather than any published schema, with the emphasis on simplicity and accessibility to the general reader as well as the specialist, who we hope will not be too critical. Radiocarbon dates are quoted either as raw dates (Libby halflife unless otherwise stated) followed by b.c. b.p. and the laboratory number, or based upon bristlecone pine calibration as dates in calendar years. The calibration tables published by MASCA (1973) have been used. Most dates are published in the journal *Radiocarbon* and the reliability and technicalities of the original dating may be ascertained there. For the historical period dates are quoted in B.C./A.D.

## The history of archaeological research in Afghanistan

*If any fool this high samootch explore  
Know Charles Masson has been here before*

Unlike her two great neighbours, India and Russia, both of whom developed state archaeological services during the nineteenth century, Afghanistan remained almost unknown to archaeology and without any department of its own until recent years. The earliest records of its monuments are in the accounts of travellers, first Chinese, then Muslim and finally European. The Chinese records are mainly those of Buddhist pilgrims who, on

their way to visit the holy places in north India, traversed the often hostile and uncomfortable lands of Central Asia and Afghanistan. Although this traffic must have begun at least by Kushan times, the surviving records which from our point of view are important only start with Fa-Hsien (c. A.D. 400). The detailed account of the travels of Hiuen-Tsang in the middle of the seventh century contains a number of references to monuments, both living and ruined, just as it provides us with our earliest secondary source for many of the Asokan sites and monuments in India. Among the places mentioned by Hiuen-Tsang are the "New monastery" (*nava sangharama* or *nau bihar*) at Balkh, and monasteries at Kapisa and Nagarahara. The description of the great Buddhas at Bamiyan, which in those days must have still been relatively new, is particularly interesting, and he informs us that the great Buddha shone golden in the sun (Beal, 1906).

From the eighth century Arab and other Muslim travellers and geographers begin to write about Afghanistan, and in some of their works too there are accounts of monuments. Thus the *Hudud al-Alam* (c. A.D. 982) mentions Balkh and its famous, painted *nau bihar*, as well as Bamiyan and Nagarahara, also commenting on the great Buddha figures (Minorsky, 1937). These attracted the attention of many subsequent writers, including Yaqut (A.D. 1461) who gives a description of the town and some of its remains. He mentions the wall paintings at Bamiyan, adding that they represented "all the birds created by God".

With European writings we encounter for the first time not only the accounts of travellers, but also coin collectors. As might be expected, much of this interest found its focus in India or Russia. It was the recognition of coins of Eukratides and Theodotus which suggested to Theophilus Bayer the plan of his history of the Greek kings of Bactria (*Historia Regni Graecorum Bactriani*) in 1738, and thereafter further Bactrian coins found their way to collectors in France, Britain and Italy. Indeed it seems that these coins led European scholars towards Bactria and its Greek rulers. This interest received a special stimulus, as did that in all other branches of oriental archaeology, in India and in Europe, from the foundation of the Asiatic Society of Bengal in Calcutta by Sir William Jones in 1784. The new spate of researches which immediately began to appear found their publication in the pages of the society's *Journal*, while in the person of the society's librarian, James Prinsep, the study of Indian epigraphy and numismatics found a notable proponent. Prinsep undertook to publish and illustrate many of the coins and antiquities which travellers and others recovered, both from the northwest of India itself and from Afghanistan. Among early travellers we may mention W. Moorcroft and G. Trebeck, whose *Travels in the Himalayan Provinces* (1819-25) were published in 1841, and H. W. Bellew's *Afghanistan and the Afghans* (1839). They noticed numerous monuments on the road from Peshawar to Kabul and thence to Bamiyan and Balkh. Another early traveller was Sir Alexander Burnes whose acute eye and keen intellect made many valuable historical and archaeological observations on his way to Bukhara in 1831-33 (Burnes 1833, 1839).

The 1830s saw a sudden outburst of archaeological work, fed no doubt by the growing British concern for Russian imperial expansion towards Central Asia. Foremost among those who contributed to knowledge of the archaeology of Afghanistan was Charles Masson who between 1834 and 1837 travelled widely there. To him we owe the first report of the old city of Begram, which he proposed to identify with the city founded by Alexander and known from





Fig. 1: The Great Buddhas of Bamiyan. From Burnes, 1833.

کتاب پر لپی شمیرہ  
دینا دین لودین کتابتون

classical sources as Alexandria ad Caucasum or Alexandria Paropamisadae (Masson, 1833, 1863a,b). Here he collected over the next few years some 30,000 coins, including many Greek and Kushan. It was this find more than any other which drew attention to the importance of Afghanistan for classical archaeology. Masson discovered other sites and antiquities around Kabul, and visited Bamiyan where he noticed the charcoal graffiti left by earlier visitors, including Moorcroft and Trebeck (Masson 1836c,d); and he left his own doggerel couplet (quoted at the head of this chapter) high up in an inaccessible place above the head of the great Buddha, where it was discovered a century later by the French mission. Another area which he surveyed was in the vicinity of Jalalabad, in the plain of the Kabul river valley, with striking results, discovering dozens of Buddhist stupas, as well as many mounds. The results of his work at Begram and elsewhere were first published in the *Journal of the Asiatic Society of Bengal* (Vols 1–5) and later as a part of H. H. Wilson's *Ariana Antiqua* (1840). Masson excavated several of the stupas and among the relics recovered were numerous coins and the famous Bimaran casket, now in the British Museum. At about the same time as Masson was visiting these places a Swiss physician (in the service of the Sikhs), Dr M. Honigberger, travelled

through Afghanistan on the way home to Europe. He too visited many of the sites around Jalalabad and near Kabul, also doing some excavations and collecting coins. The results of his work were published in the *Journal Asiatique* 1836-39. Another medical man, J. G. Gerard accompanied Byrnes and left a memoir of these same sites (Gerard, 1834).

The various researches of the third decade of the nineteenth century led to several important new publications. We have already mentioned Wilson's *Ariana Antiqua*. Another writer to use the new material was Christian Lassen, a Norwegian who spent most of his working life at the University of Bonn. He wrote a monograph on the history of the Greek and Indo-Scythian kings of Bactria, Kabul and India, published in 1838. With the British invasion of Afghanistan in 1839, and the political uncertainties that ensued, the volume of original research dries up, and once more the stray traveller's report is the only new material forthcoming. For instance, J. P. Ferrier's *Caravan Journeys*, published in 1856, records his travels in 1846, with many references to archaeological remains at Karabagh, Kandahar, and elsewhere. He also included a tantalising reference to remains of an old city in a valley between Sar-ipul and Boodhi, where he noticed some great reliefs cut out of the rock. These have so far eluded the attempts of subsequent archaeologists to rediscover them. The collecting of coins continued as is witnessed by P. Gardner's *Catalogue of coins of the Greek and Scythic kings of Bactria in the British Museum*, (1886); while such geographical accounts as H. G. Raverty's *Notes on Afghanistan*, 1878 and T. H. Holdich's *Indian Borderland* (1901) and *Gates of India* (1910), contain much of value to the archaeologist, even if not primarily written from this point of view.

Russian interest in Central Asia had already found expression in F. Nazarov's work (1821), and developed an archaeological or historical bias in a number of other works, such as I. Bichurin's study of the antiquities of Central-Asia (1851), K. Ritter's *Kabulistan and Kafiristan* (1867), and the writings of O. Tomaschek, particularly his *Central Asiatic Studies* (1877).

The twentieth century produced a number of new names among whom we may mention three in particular, V. V. Bartold, 1869-1930, whose many works on the history of Central Asia contain much of relevance for Afghanistan; Sir Aurel Stein, 1862-1943, whose longstanding interest in archaeology took him on a series of expeditions in Central Asia, India and Iran, which although they largely skirted the geographical confines of Afghanistan nonetheless contributed much that relates to it; and A. Foucher, 1865-1952, whose consuming interest in the extensions of Greek and Hellenistic culture into the east led him to Afghanistan, where the studies of his later years were mainly concentrated. His interest early found expression in the monumental *L'art greco-bouddhique du Gandhara* (Vol. 1. Paris, 1905; Vol. 2. Paris, 1918); and in a whole series of supporting publications. By these works Foucher established a claim to be the leading art historian in this field. The collection and publication of basic data continued with work such as that of Tate (1912) on Sistan.

A new era for archaeology in Afghanistan began in 1922 with the signing of the Franco-Afghan archaeological convention. The terms of this created a permanent *Délégation Archéologique Française en Afghanistan* (DAFA), giving it a virtual monopoly over research. This established for the first time a permanent base for archaeological research in the country. Its creation was in no small way the result of Foucher's enthusiasm, and he was the natural person



to become its first director. The fruits of its labours can be seen by reference to the pages of the series of Memoirs which it published. These include, among others, Foucher's magnum opus on *La vieille route de l'Inde, de Bactres à Taxila* (2 vols, 1942 and 1947); excavations and studies at Hadda by J. Barthoux and others; a series of studies of Bamiyan, particularly by J. Hackin, who succeeded Foucher as director; excavations and studies at Begram, including the discovery and publication of its wonderful treasure, by Hackin, R. Ghirshman and others; numismatic studies of the coins of the Hephthalites and of important hoards of Greek coins; the discovery and excavation of a Kushan dynastic temple at Surkh Kotal, by D. Schlumberger, 1952-63; studies of the Ghaznavid palaces at Bust and Lashkari Bazar; and of the discovery of the minaret of Jam by A. Maricq; and finally two prehistoric excavations, of Nad-i-Ali in Seistan by Ghirshman, 1938, and at Mundigak near Kandahar by J-M. Casal, 1951-58. The most recent discovery, which sets the seal upon Foucher's great vision, has been of the Greek city of Ai-Khanum, in 1963, and its subsequent excavation by Schlumberger and his successor P. Bernard.

In the years leading up to the Second World War other nationalities began to take an interest in the subject. In 1938 a small British expedition, consisting of E. Barger and P. Wright, surveyed sites in north Afghanistan, particularly around Qunduz and in Badakhshan. But it was not until the end of the war that international interest in Afghanistan and her archaeology took on a new form. As much of the work and many of the names which are connected with this period are dealt with in detail in subsequent chapters of this book, we shall not enumerate them here. Rather we shall indicate something of the breadth of this new interest. In 1946 the Indian Government sent a team headed by the Director General of Archaeology, Mortimer Wheeler, to visit Afghanistan and make a survey of sites, mainly in the north. Indian interest has continued and found expression in a number of expeditions aimed at offering assistance to the Government of Afghanistan in the conservation of Bamiyan; plans are also in hand for an excavation. We have already mentioned the continuing work of the French Delegation. An Italian Mission, affiliated to the Istituto Italiano per il Medio ed Estremo Oriente (IsMEO), and inspired by G. Tucci, has been working since the 1950s. This mission has carried out extensive excavations and explorations around Ghazni, under A. Bombaci and U. Scerrato, and at the neighbouring Buddhist complex of Tapa Sardar, under M. Taddei. British work was mainly on an individual basis, until 1972, when a British Institute of Afghan Studies was established in Kabul. This institute has undertaken excavations at Kandahar. German work has been mainly concerned with the survey of sites of the Muslim period in Seistan and the Herat area.

There has been a considerable volume of American research. In 1949 W. Fairervis led the first expedition to Kandahar and Sistan areas, surveying a number of sites. In the following season Louis Dupree excavated at Deh Morasi Ghundai, while Fairervis made further explorations in Seistan: Dupree also excavated at Shamshir Ghar. In 1953 Rodney Young excavated part of the defences of the lower city of Balkh, obtaining important chronological data; and in 1954 Carleton Coon carried out pioneering excavations in Kara Kamar cave near Haibak, revealing Stone Age deposits (Coon, 1957). These were the first excavations of a prehistoric cave site of this period in Afghanistan. Since 1959 Dupree has made further surveys and excavations of prehistoric and later sites, notably at Aq Kupruk in western

Badakshan, and elsewhere in north Afghanistan. In 1970 George Dales carried out a survey in Seistan and excavated at Nad-i-Ali.

The Soviet Union have recently established cooperation in the form of a Soviet-Afghan archaeological expedition which since 1971 has undertaken explorations and excavations at several sites in the neighbourhood of Akcha, including Dashli, Tillya Tepe and Altin Tepe. These excavations have yielded very promising materials, to judge by the published results to date. A Japanese expedition from Kyoto University have been working in Afghanistan since 1960; initially led by S. Mizuno it made surveys in the Haibak region, and more recently in collaboration with Afghan archaeologists has been excavating and surveying Buddhist sites in the Hadda region.

Finally some mention must be made of the initiation of field work by the Afghan Government itself. Since 1965 Dr S. Mustamandi and subsequently Dr Z. Tarzi have been excavating at Tapa Shotor and other sites in the neighbourhood of Hadda, and thus laid the foundations for a local school of archaeological research. In view of the number of ancient sites already known and the magnitude of the work involved in their excavation, one can only applaud this development, and look forward to its future progress.

To conclude this brief survey of the history of archaeological research in Afghanistan, we would like to point to two trends which have become apparent during the past three decades. The first is towards international participation. The Government of Afghanistan have permitted and encouraged the presence of foreign teams and archaeological missions, and these have been able to make a substantial contribution. The international authorship of this book is one of the fruits of this tendency. The second, in the long run more important, trend has seen the beginnings of an indigenous pool of trained archaeologists, undertaking their own researches. This was looked forward to by one of us at the beginning of the period (Allchin, 1957, 141):

It is to be hoped that the time is not too far distant when the Government of Afghanistan will recognize the tremendous interest of its ancient sites and institute its own program of research. If the work is to succeed it will do so best when local interest supports local workers.

Through the harmonious progress of these two trends Afghanistan has made great strides, and its past—once so tantalizing because unknown and inaccessible—has begun to grow more distinct.

# 1 The Geographical Background

*Sophia R. Bowlby*

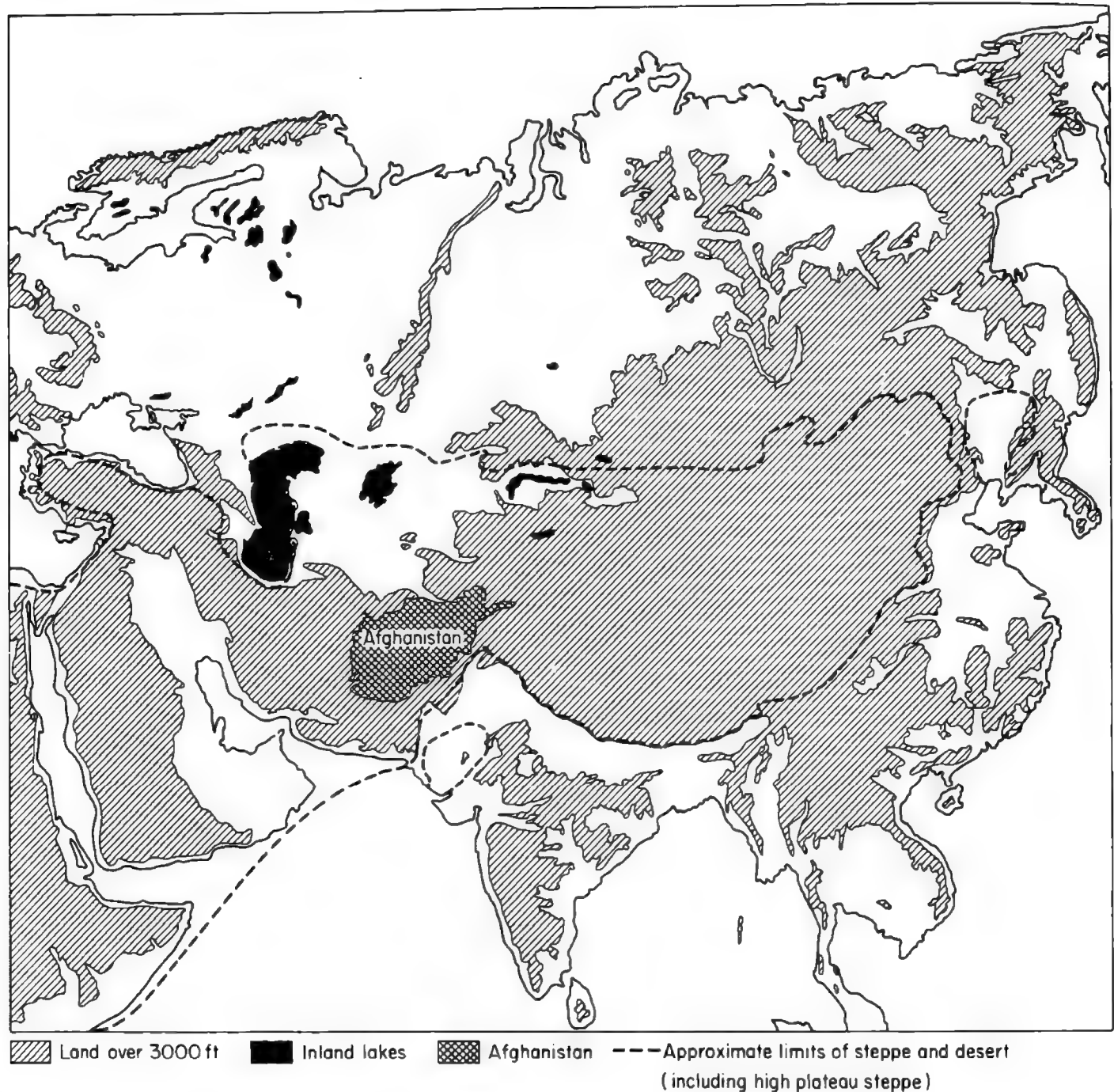
Afghanistan lies at the heart of Eurasia within the vast belt of steppe and semi-desert that stretches from the Mediterranean to China (Fig. 1.1). Routes from north to south, west to east criss-cross the country and through the centuries have carried in a diversity of peoples—Mongols, Greeks, Indians and Iranians during the historic period alone. Many of these different groups can still be distinguished in the population today. This variety of peoples is easily matched by the variety of landscapes which range from the icy pinnacles of the Hindu Kush to the blazing wastes of the Dasht-i-Margo, from dry, dusty steppe-lands to oases and terraced valleys.

Given this variety of environment and peoples, there are many forms of economy that the early inhabitants may have adopted. The purpose of this chapter is to reconstruct the nature and distribution of resources available to these settlers and to outline the range of economic alternatives open to them. This should help us to understand the economy and society that each group created.

Any such attempt at reconstruction must consider what resources were relevant to the peoples of the past. The archaeology of Afghanistan covers a vast span of time and a great variety of human groups, some with primitive and some with fairly advanced technology. However, most of them had to gain the bulk of their food and their materials for tools, shelter and clothing from their immediate locality, so that the distribution of natural resources must have been of great significance to their livelihood.

Perhaps the major influence on the distribution of natural resources within an area is its climate. The climate of Afghanistan today certainly has a profound effect on its agricultural possibilities, natural vegetation and wild life. Thus one of the first questions that needs to be answered is whether there have been significant changes in climate during the time period of interest here—namely from around 70,000 B.C. to the sixteenth century A.D. Before dealing with this question, however, it is pertinent to describe briefly the major physiographic features of Afghanistan, since these play an important part in its past and present climatic character.

The geology of Afghanistan is not well known. The whole country is part of the belt of recently folded mountains that stretches from the Pyrenees to the Himalayas and beyond (Brice, 1966; Cressey, 1960). The Tethys sea once lay between a large, stable continental block to the south (of which modern India and Africa were a part) and a similar stable block to the north. As time passed, the older rocks on the bottom of the Tethys sea became covered over with sediments carried off the neighbouring land masses. Then, during the late Mesozoic



**Fig. 1.1:** The location of Afghanistan within Eurasia.

and early Tertiary, the whole sea bed was folded upwards against the continental blocks to north and south so forming a whole system of mountain chains. These chains tend to be composed of series of parallel ranges and their directions were partly determined by the outlines of the resistant continental blocks. The mountain building activity was accompanied and followed by volcanic activity, rifting and fracturing. Rivers and weathering agents have further altered the landscape.

In the Afghan area today there are two main sets of mountain chains, one of which sweeps south-southwest from the Pamir knot along the Indus valley towards the Persian gulf; the other splits into two branches, one running westwards towards Herat and the Caspian and another running southwest, decreasing in height until it vanishes into the Helmand basin. (Fig.

1.2) Within the highland area there are down-faulted basins, and to the west the Helmand valley forms a great intermontane basin between the two principal chains.

The core of the mountainous area, the Hindu Kush around Kabul, is formed of a complex of older crystalline rocks with metamorphics (Gansser, 1964). In Nuristan, to the northeast of Kabul are found gneisses, schists and granites and these crystalline rocks can be traced to the southwest. The part of the Hindu Kush running westwards from Kabul and ending near Herat is also geologically complex with old crystalline and sedimentary rocks. The crystalline rocks of these two mountain branches are bordered by large areas of Mesozoic rocks, which comprise most of the remaining area of the northern mountain ranges. These rocks are largely sedimentary, for example much of the northern foothills area is composed of limestone. The small basins within the highland area are often filled with late Tertiary sediments.

To north and south of the Mesozoic highland area Tertiary rocks are found. In the north these do not cover a very extensive area but in the south they form a large part of the high

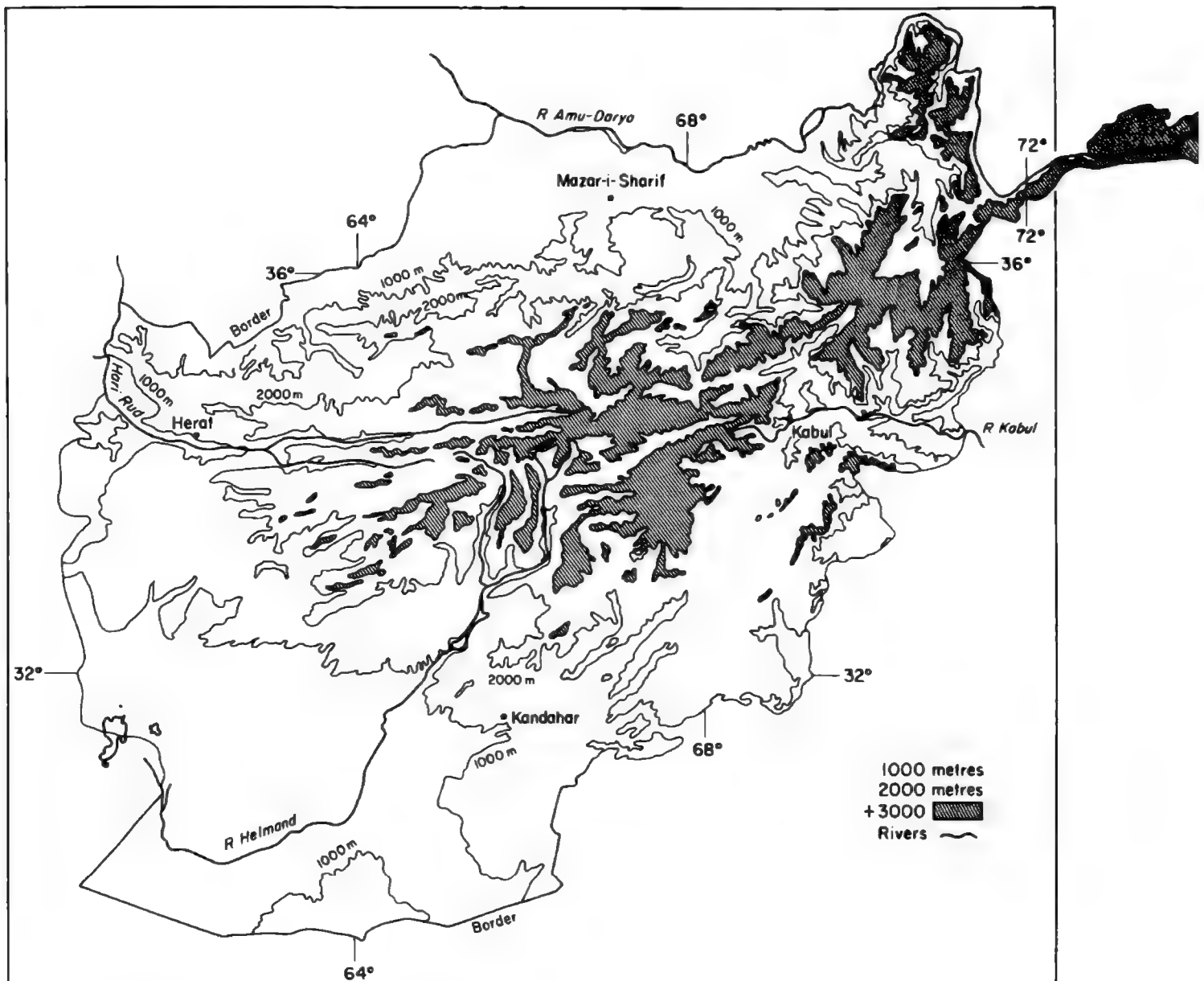


Fig. 1.2: Afghanistan: relief and drainage, showing major rivers.

plateau between the southern Hindu Kush and the second main range of mountains, the Sulaimans. The Sulaimans are mostly outside the present boundaries of Afghanistan but, although they are not as high as the main Hindu Kush their strong folding has created a formidable mountain barrier between Afghanistan and the Indus valley that is only breached by a few principal passes. They are largely composed of Mesozoic and Tertiary rocks.

The dry areas of the Helmand basin and the lowlands along the Amu-darya are covered mostly with young Quaternary sediments and in the Helmand the Kuh-e-Sultan is a reminder of the volcanic activity that is found along the lines of mountain building.

## Climate and Climatic Change

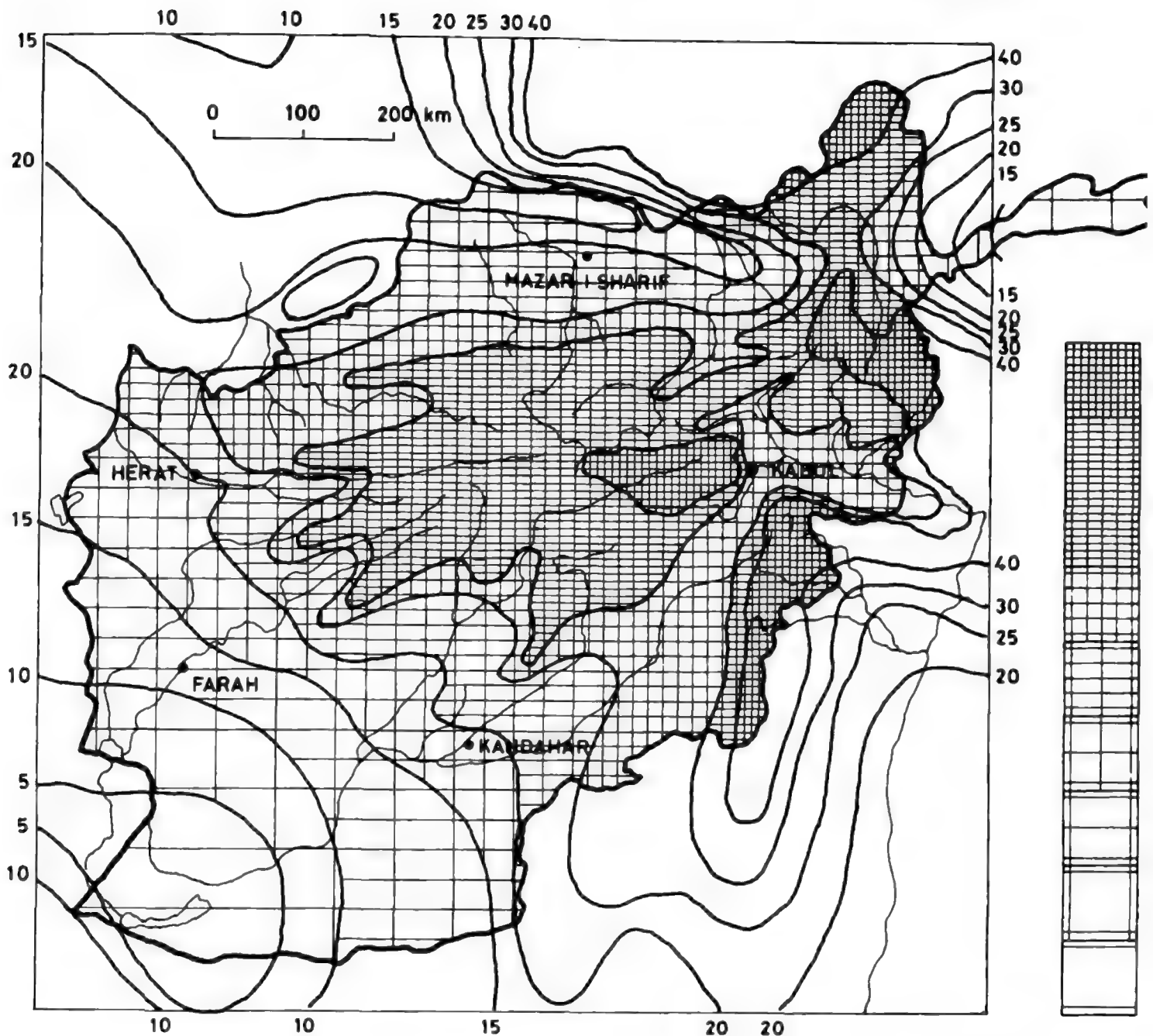
Afghanistan did not establish a network of meteorological stations until 1939 and even then these were few relative to the size of the country. Thus one cannot be certain of many features of the climatic regime. However, there is little doubt of the general aridity of the climate. With few exceptions the mean annual precipitation does not exceed 40 cm per year and in the southwestern corner of the country true desert conditions prevail. The larger part of the lowlands fringing the mountains are semi-desert or steppe lands with precipitation of 20–30 cm per year and scanty vegetation except along the major rivers. These rivers have their origins in the mountains which enjoy slightly higher amounts of precipitation than the rest of the country (see Fig. 1.3). In most areas the precipitation falls in the winter, much of it as snow. During the spring and early summer the melting snow feeds the rivers so that these have their highest flow during periods with little rain, this seasonal peaking of flow often results in severe flooding and erosion.

There are a few areas within Afghanistan with rather higher rainfall—notably the valleys on the southeast borders that open into the main Indus valley, for the Indian monsoon usually reaches these areas bringing some slight rainfall in early summer. The most famous of these valleys is the lower Kabul valley around Jalalabad but even here irrigation is a vital part of agriculture and Michel (1959) has suggested that the best climatic analogue is the Imperial valley in the southwestern United States.

The effectiveness of any rainfall that does arrive during the summer months is lessened by evaporation. Mean July temperatures are usually above 25°C and daily maxima can be well above this. In the southwest the mean July temperature is about 35°C but in the high mountains it is 10°C or less. However, these hot summers are followed by very cold winters—for January, mean temperatures range from around +6°C in the southwest and +3°C in the northern lowlands to well below freezing in the mountains (Figs 1.4 and 1.5). In the summer the snowline is around 4500–5000 metres, in the winter 1800 metres.

Thus Afghanistan has a dry continental climate with altitude playing an important part in the spatial pattern of temperature and precipitation. On the whole, winds are not abnormally strong except in the southwest where severe winter blizzards may occur and where, in the summer, a hot dry wind blows strongly from the northwest. Known locally as the “Wind of 120 Days” it may reach over 100 knots and blows from July to September whipping away loose topsoil and spreading and shifting the desert sands.





**Fig. 1.3:** Annual rainfall: the data on which the map is based are poor and it should be regarded only as a general indication of rainfall amount and distribution (after Humlum, 1959).

Enough has been said to indicate that in most parts of Afghanistan an important limit to the productivity of agriculture will be the water supply available during the growing season and that high yields will depend upon the possibilities of irrigation. Moreover the natural vegetation and fauna will also be strongly influenced by the amount and incidence of precipitation. Thus, it is important to establish whether and to what extent these conditions prevailed throughout the archaeological period.

Just as data on the modern climate of Afghanistan are inadequate so too are the data from which assessments of the earlier climatic conditions might be made. Most of the work on climatic change in prehistory in the Old World has been done on North Africa, Europe and

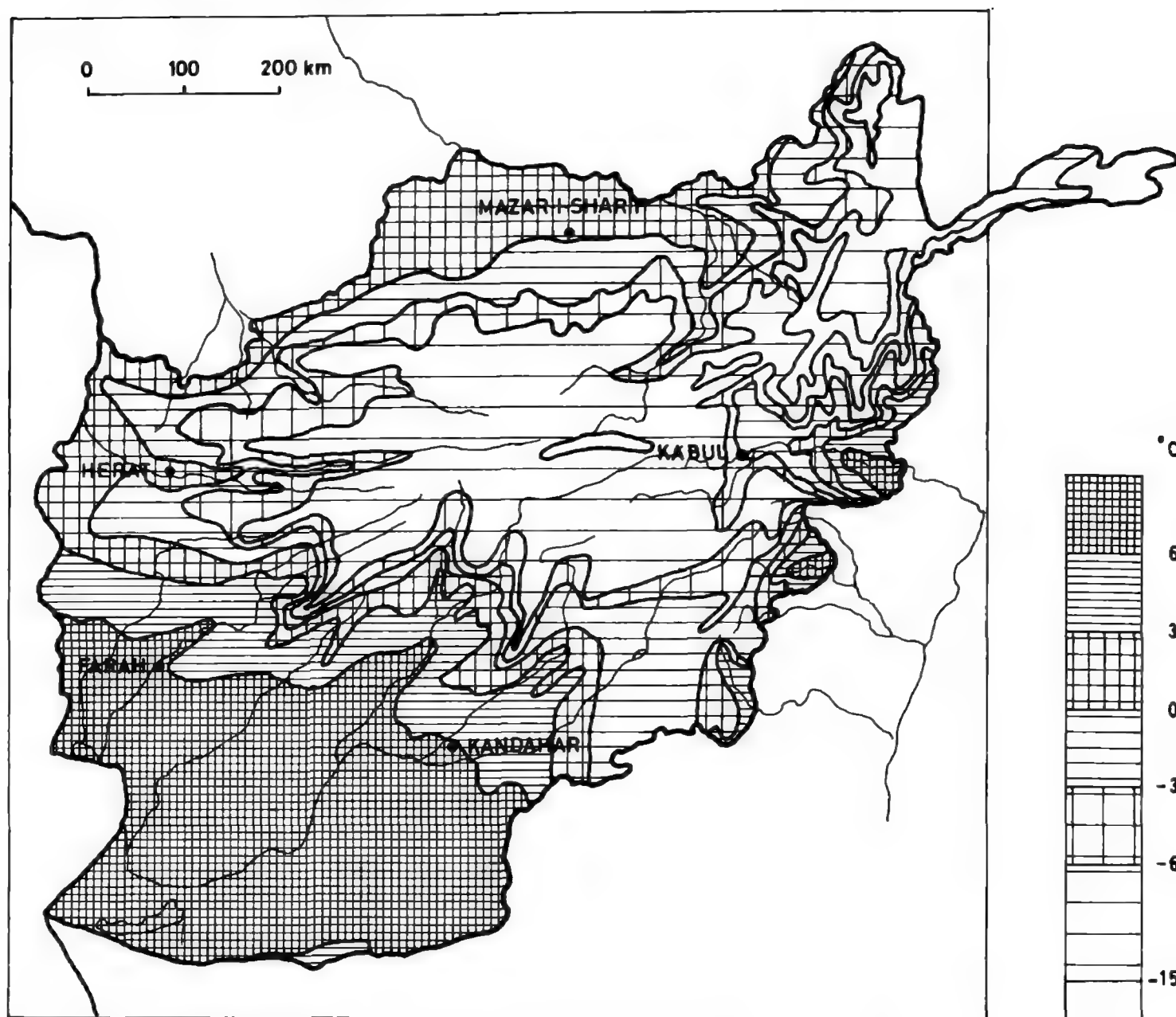


Fig. 1.4: January isotherms; the data on which the map is based are poor and some temperatures have been inferred from elevation and are not based on observation (after Humlum, 1959).

the Near East. It seems reasonable to assume that we can argue from what is known of climatic change in these areas to the likely conditions in Afghanistan but further research may well modify this assumption. Moreover, there is certainly no unanimity over the climatic history of these areas so that only a broad sketch of the possibilities will be attempted here.

The southern deserts of Afghanistan lie on the poleward margins of the sub-tropical desert belt. Thus they owe their existence in large measure to the pattern of atmospheric circulation. If this pattern shifts then the amount of precipitation in these deserts is likely to alter. Past shifts in the tradewind belt and in the course of the westerly depressions could have altered the precipitation in southern Afghanistan significantly.

The areas to the north and west of the Hindu Kush, on the other hand, while not unaffected by the atmospheric circulation, owe their aridity primarily to their situation



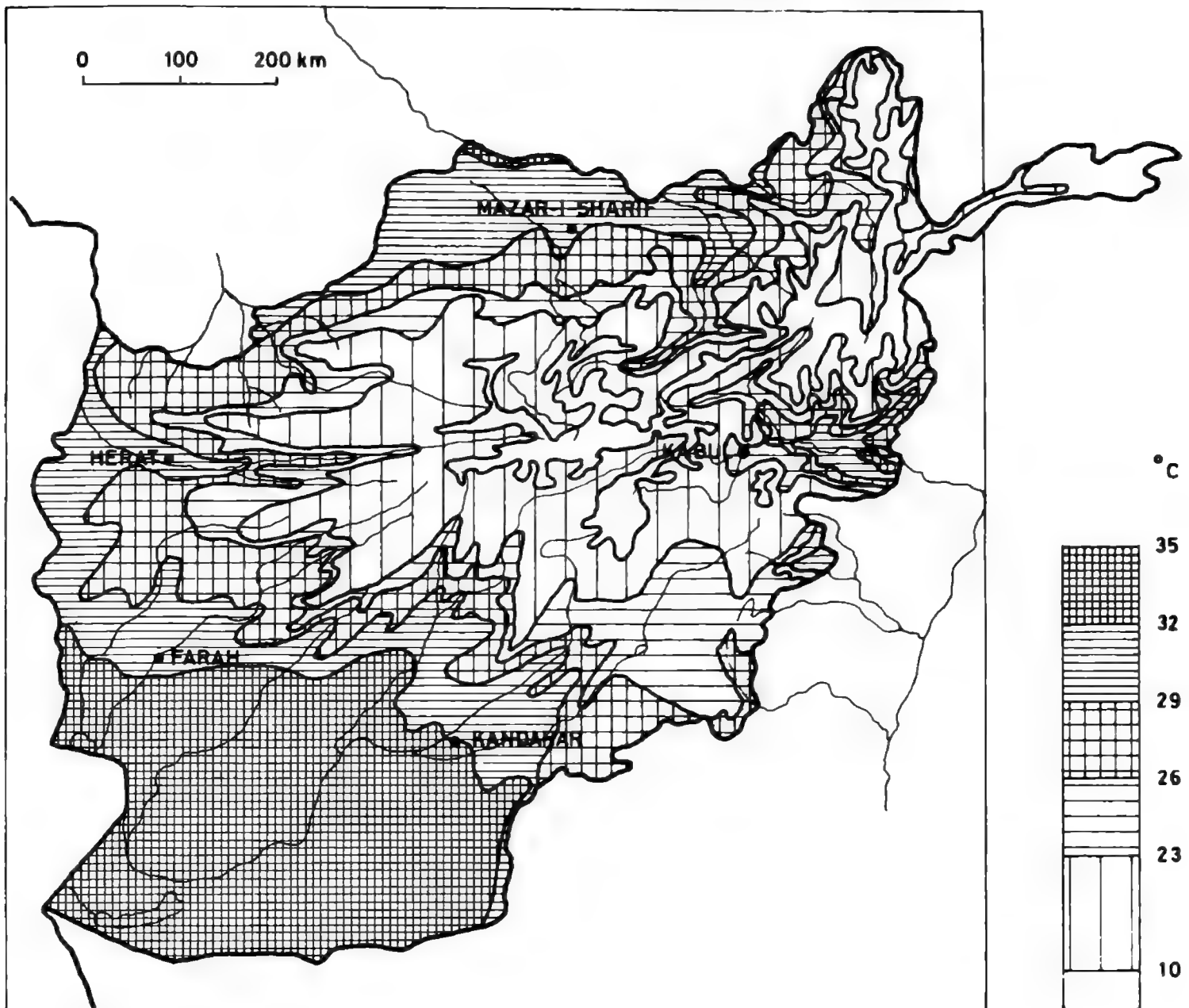


Fig. 1.5: July isotherms: the data on which the map is based are poor and some temperatures have been inferred from the elevation and are not based on observation (after Humlum, 1959).

within the Eurasian land mass, with mountains or uplands to north, west and south. Any moisture-bearing air mass has to cross an extensive landmass and mountain or highland barriers that will probably cause precipitation to occur before its arrival in these areas. This situation has remained unchanged throughout the prehistoric period so that although temperature changes may have altered the effectiveness of precipitation through the evaporation rate, there is unlikely to have been much alteration in the amount of precipitation (Butzer, 1961a).

In the Near East and North Africa there is data to suggest that the periods of glacial advance were correlated with "pluvial" periods in the lands on the margins of the trade wind desert areas and this has been explained by shifts in the pattern of circulation accompanying the glacial advance (Butzer, 1961a). These changes in circulation probably involved a

southwards shift in the climatic zones of the Sahara and corresponding changes in the flora and fauna (Butzer, 1961a). It seems possible that similar changes may have occurred in the desert and steppe lands south of the Hindu Kush especially since some data from Iran indicate increases in precipitation occurring simultaneously with those in the Near East. However, there is considerable controversy over the correlation of pluvial and glacial periods and there may be changes in moisture unrelated to major shifts in the world's circulation (Butzer, 1961b).

During the interglacials the climatic changes appear to have been even more complex than during the glacials. For much of the time the climate appears to have been similar to that of today and sometimes more arid although towards the end of the interglacials a warm, moist climate may have occurred and it has also been suggested that there are pluvial interglacials. About halfway through the last millennium B.C. the climate seems to have shifted from a more arid phase to the modern pattern and subsequently showed only short-term variations. Butzer has suggested the time scale shown in Table I for the Old World. More detailed tables for climatic changes in North Africa can be found in Smith (1975).

If the climate of Afghanistan followed the stages outlined above we can suggest the following series of events. During the Upper Pleistocene the lowland areas of Afghanistan would have been cooler than today—maybe with summer temperatures 5°C lower. In the north they would have been as dry as today although evaporation would be less; in the southern areas the rainfall was probably higher as well as being more effective and some of the

**Table I:** Recent climatic changes in western Eurasia

<i>Major period</i>	<i>Sub-periods</i>	<i>Northern Europe</i>	<i>Lower latitude arid zone</i>
<u>Holocene</u>			
Present to c. 10,000 years ago	Sub-Atlantic Present–500 B.C.	Cooler, humid	Slightly moister
	Sub-boreal 5/800–2500 B.C.	Warm, dryer	Extremely arid
Postglacial period with minor fluctuations	Atlantic 2500–5600 B.C.	Warm, humid	Moist warmer
	Boreal 5600–6800 B.C.	Continental, dry	Arid
	Pre-boreal 6800–8100 B.C.	Cool, dry	Extremely arid
<u>Upper Pleistocene</u>			
10,000 years ago to c. 100,000 years ago		Late Würm glacial	Post-pluvial. Phase I
		Early main Würm glacial	Pluvial (Gamblian)
		Late interglacial	Pluvial (Gamblian)
		Riss/Würm interglacial	

After Butzer (1961a) pp. 38, 41.

area was probably forested. The mountains would have been glaciated and uninhabitable. By the onset of the Holocene the glaciers would be in retreat, the average temperatures would rise and the southern areas would become very arid—more so than today. However by the sixth millennium the climate here would become moister and more favourable to vegetation and animals than it is today, until in the third millennium a drier phase began that lasted until about 500 B.C. when the climate assumed its present character. It would be during the periods of change rather than those of climatic stability that most active geomorphological change to the landscape would occur.

However, this very generalized climatic history is by no means universally accepted or applicable to all areas. Raikes (1967), for example, maintains that there have been no significant shifts in climate in the North Eastern low latitude arid zone since about 5000 B.C. and that changes in vegetation and increases in the extent of the desert have arisen from the activities of man. Once clearance of the vegetation by burning, grazing or for agriculture has occurred a small temporary decline in rainfall in steppe and semi-desert areas can have disastrous consequences. The exposed soil is open to erosion and an increase in salinity and the return of more plentiful rainfall will not restore the soil's fertility or the vegetation. The impact of man may be illustrated from the historic period by the changes that took place in Seistan, the area around the lower reaches of the Helmand river. This area once supported a flourishing agriculture based on extensive irrigation. This was apparently the case when Alexander marched his troops along the river and continued until the irrigation works were destroyed during the Mongol invasions in the thirteenth and fourteenth centuries (Fischer, 1973). The works were not repaired and the area became a saline waste supporting only a tiny population. The failure to restore the irrigation may have been due to social disorganization but may also have been influenced by a loss of soil fertility resulting either from erosion during the period when cultivation was interrupted or from over-irrigation during the previous period. It seems probable that here the change towards more desert conditions was due not to climatic change but to man's activity. (At present the Afghans are attempting to develop the Helmand valley through a comprehensive water control and irrigation scheme but are finding considerable difficulties with the saline soils.)

Whyte (1961) suggests that there is some doubt that the increased rainfall and humidity in the dry zone that was supposed to characterize the Atlantic period did indeed occur. Braidwood (1958) has questioned whether a uniform desiccation throughout the arid zone set in during the Preboreal period. It is likely that there were local variations; for example, Vita-Finzi (1969) has suggested that during the Pleistocene northwest Iran did not experience pluvial conditions but that cyclonic rainfall decreased in importance and the incidence of short, heavy downpours increased. After about 11,500 B.P. until 5500 B.P. he suggests that cyclonic rainfall became generally more prevalent.

As already stated, there is little data from Afghanistan itself but Goudie *et al.* (1973) have shown that in northwest India there was a final arid phase ending approximately at the end of the Pleistocene, which is considerably earlier than the 5600 B.C. date for the ending of the arid period suggested by Butzer for the Near East and Iran. Bryson and Baerreis (1967) show that it is unlikely that the climate was wetter than today in the Indus valley and Baluchistan during the second half of the Atlantic period.

Evidently we cannot simply apply a reconstruction of African and Near Eastern climatic history to Afghanistan and a fuller understanding must await further investigations by archaeologists and others. However, since most of the comments on Butzer's work have tended to minimize the size of climatic changes, the foregoing discussion may serve to indicate the maximum frequency and extent of the variations in climate that may have occurred.

## Natural Resources for Subsistence

The evidence on climatic change suggests that, at least since 500 B.C. and possibly earlier, there have been no major variations in climate, although small fluctuations in aridity or temperature may have occurred. Thus, we can gain a considerable understanding of the resources available in the recent past by examining the present situation. For the earlier periods we may take the drier, colder, or wetter areas of Afghanistan as indications of conditions that may have been more widespread during drier, colder or wetter periods, respectively. The present situation may also serve as a norm with which to compare earlier conditions.

As is the case in most developing nations reliable statistical information on Afghanistan is somewhat difficult to acquire. However, the Danish geographer J. Humlum produced a regional geography of Afghanistan in 1959 which provides an extremely thorough and comprehensive treatment of the available knowledge about the modern economic and social geography of the country. Louis Dupree has recently published a book (Dupree, 1973) which also provides an extensive coverage of data on modern Afghanistan and much of the following information is derived from their works.

Both Humlum and Dupree have suggested rather similar divisions of the country into regions based largely on criteria of climate and physiography. For the purposes of this discussion a modification of Dupree's categorization has been adopted. This is shown in Fig. 1.6 and generalized maps of vegetation, climate and relief in Fig. 1.7.

The thirteen contrasting environmental areas shown in Fig. 1.6 have been grouped into five main types, distinguished on the map by shading. First, the high mountains of Badakhshan, Nuristan, the Wakhan corridor and the Central mountains. Next are the northern and southern mountains and foothills which border the Central mountains. The Turkestan plains, the Herat-Farah lowlands and the two major river valleys follow and last come the deserts to north and south of the Helmand.

## The High Mountains

Badakhshan and Nuristan are mountainous areas lying to the west of the main block of the Pamirs. Nowadays the international boundaries divide the Pamirs between Russia, China, Pakistan and Afghanistan but these boundaries do not follow any marked natural features and the Wakan corridor and Pamir knot should be considered as part of a larger "Pamir region".

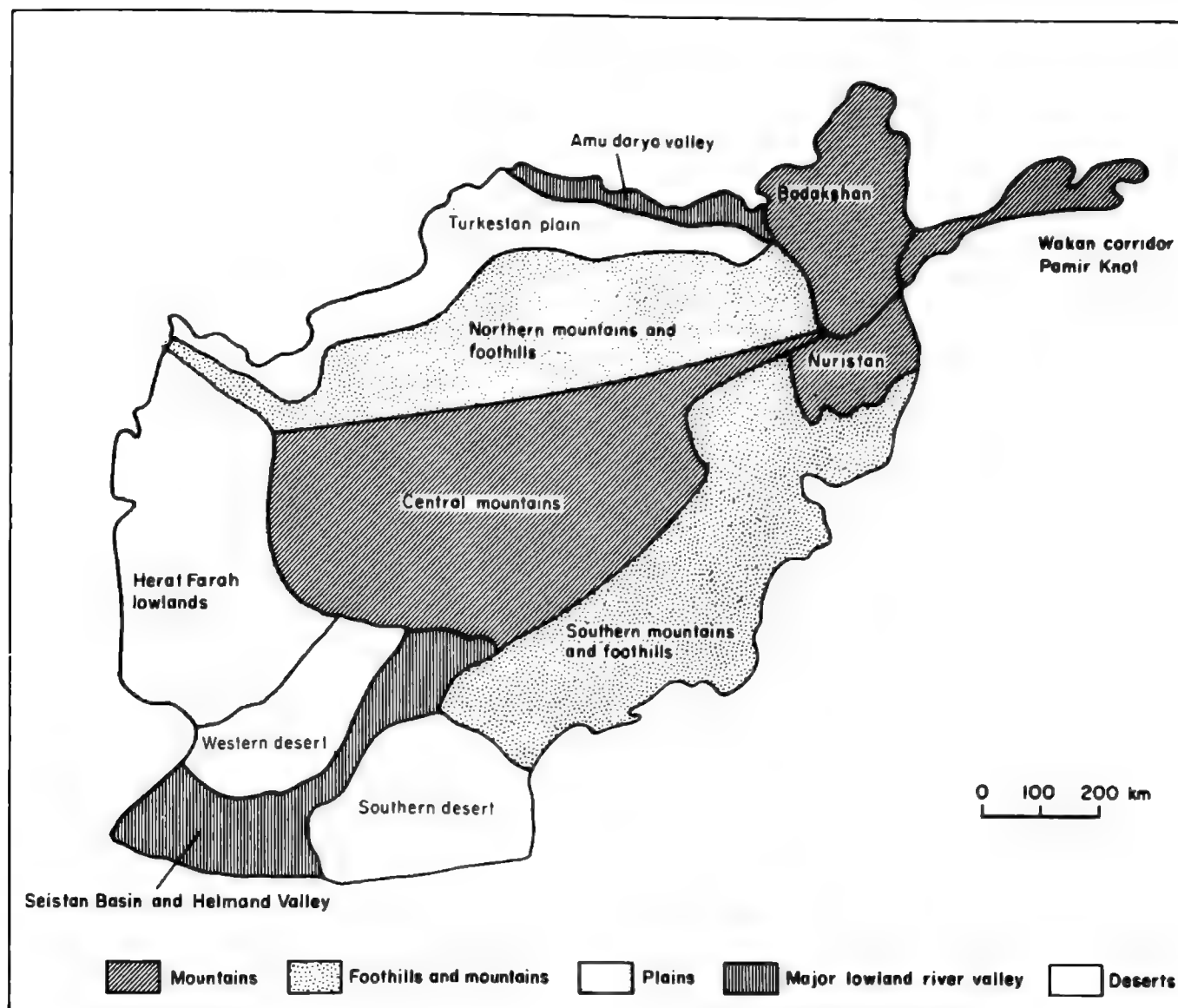


Fig. 1.6: Physiographic regions of Afghanistan.

The Pamir area lies at very high elevations—most of it is above 3000 m with individual peaks reaching up to 7620 m. Perpetual snow covers land above 5000 m and travel in the valleys is hindered by glaciers and steep and narrow gorges. The Wakan, Badakhshan and Nuristan lie at slightly lower elevations and form a mountainous link between the Pamirs and the Central mountains. Summer passes lead from what is now Pakistan and from the Russian steppes through Badakhshan, across the Pamirs to the Tarim basin and China.

Throughout these areas the climate is extreme with winter temperatures well below freezing, but daytime summer temperatures sometimes reaching 26°C or so (Fig. 1.8). The climate is greatly affected by elevation so that there is considerable local variety in the habitat. The mountains are geologically complex with a great diversity of rocks which have been subjected to strong movements and pressures during the events of the orogeny that formed the Himalayas. Although there are local variations depending on rock type the soils are predominantly thin but in some valleys there is richer alluvial material originally deposited in the glacial lakes. This will support good pasture or crops in the lower valleys.

The area of the Central mountains is mostly at altitudes above 2700 m with the higher peaks ranging from 4270 to 4180 m. The whole range is higher in the east than in the west. There are a number of passes over the mountains, the two most important being the Shibar and Salang. Again the local climate is strongly influenced by altitude and aspect which affects not only temperature but also rainfall. Although this area gives rise to three major Afghan

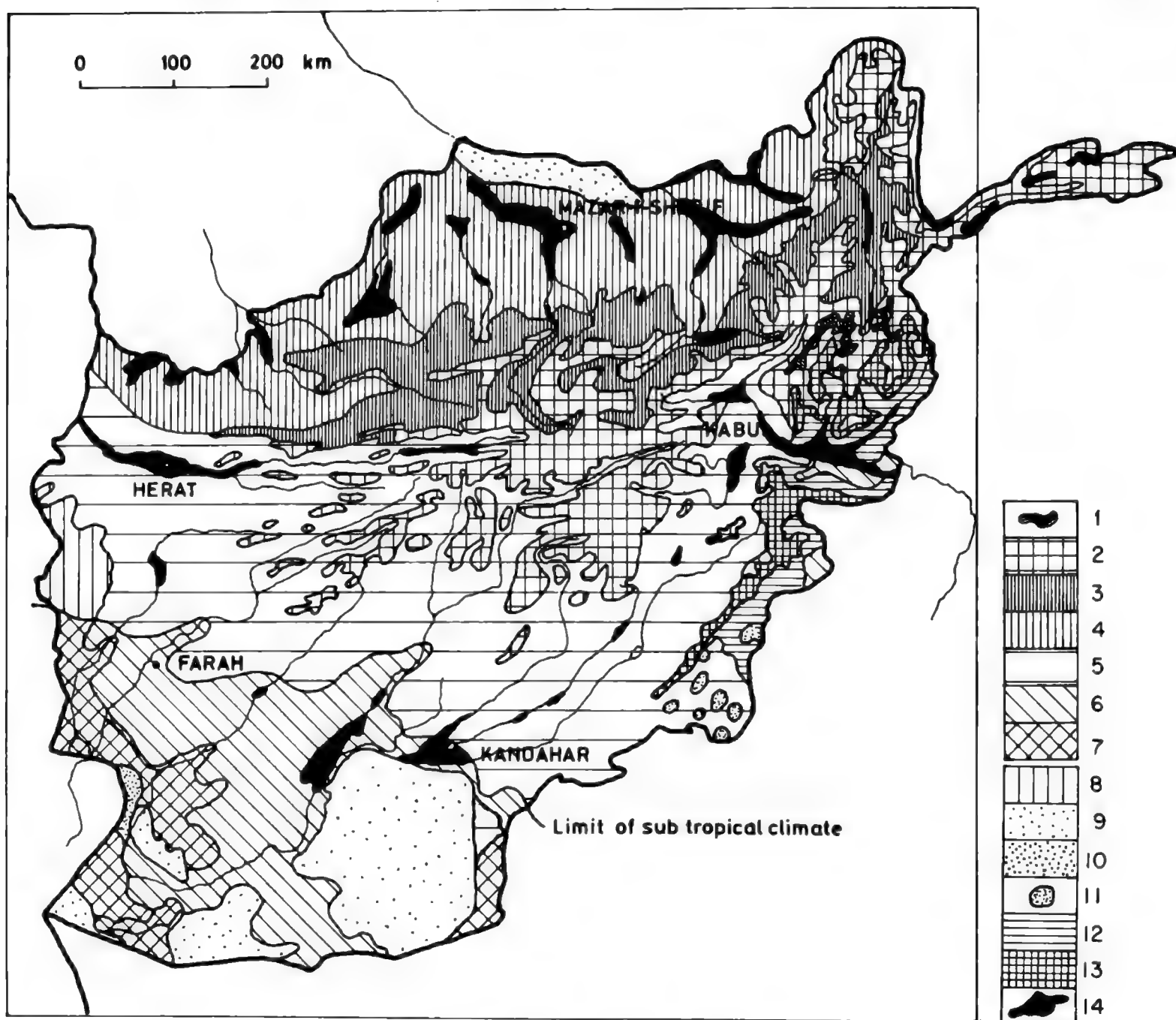


Fig. 1.7: Natural vegetation (after Humlum, 1959). 1. Glaciers or permanent snow. 2. High altitude steppes. 3. High altitude grassland. 4. Wooded steppes of North Afghanistan with gallery forest along watercourses. 5. Wooded steppes of South Afghanistan with gallery forest along watercourses. 6. Wooded sub-tropical steppes with gallery forest along watercourses. 7. Sub-tropical steppes with Salsolaceae. 8. Temperate steppes with Salsolaceae. 9. Temperate and sub-tropical steppes. 10. Tamarisk and other gallery forest. 11. Steppes with Juniper thickets. 12. Deciduous forest. 13. Coniferous forest. 14. Irrigated areas.



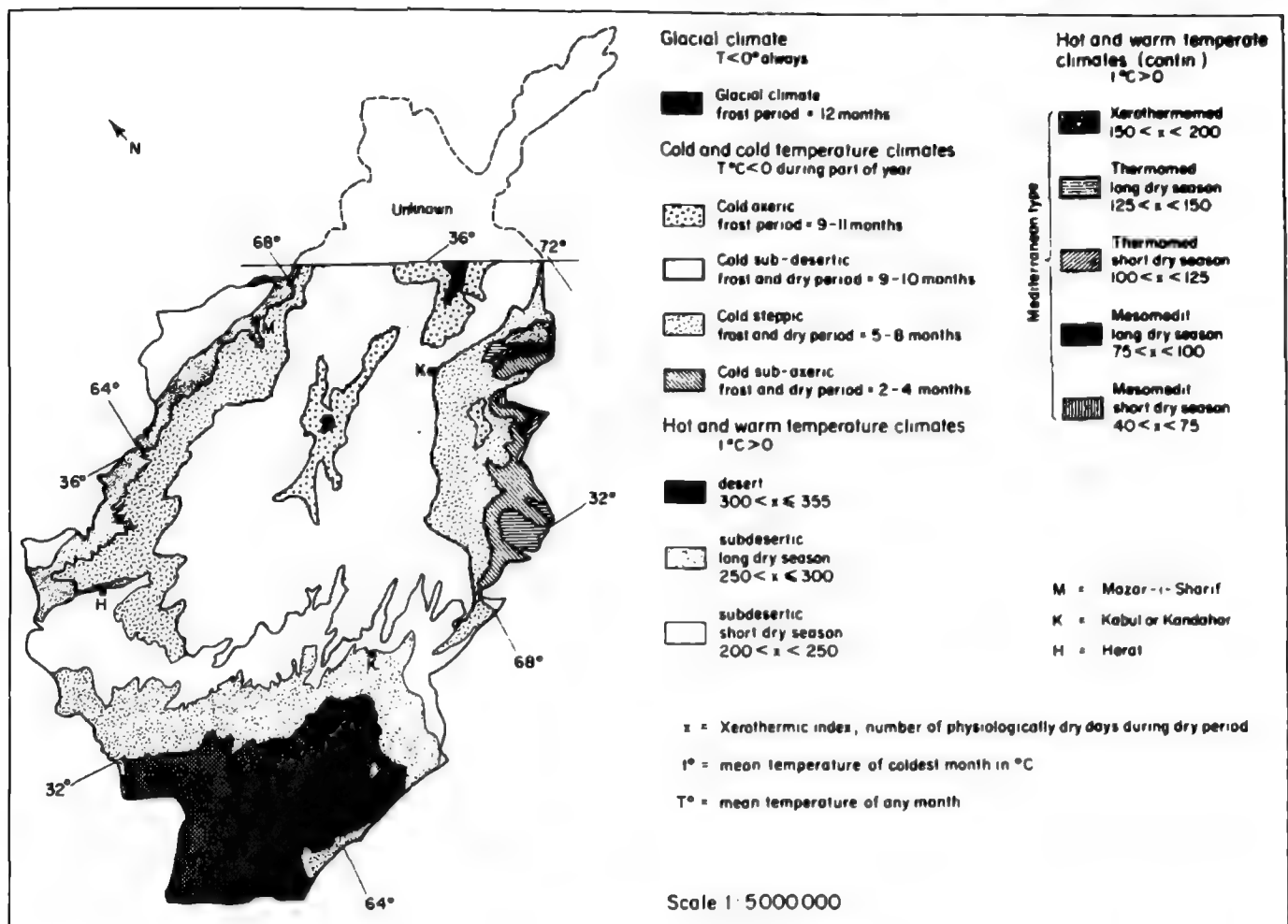


Fig. 1.8: Bioclimatic zones. (After FAO-UNESCO Bioclimatic map of the Mediterranean region.)

rivers—the Kabul, Helmand-Arghandab and the Hari-Rud—it does not have a high rainfall and the natural vegetation is generally scanty and low.

In Table II, taken from Dupree (1973), an indication of the natural vegetational zones within the Central mountains and Nuristan is given. In general, this chart would also apply to Badakhshan and the Pamirs. The forest zones offer food plants for collection and animals for hunting. In the Panjshir valley the forests were cut down during the pre-Islamic period (Dupree, 1973). At the lower elevations cleared land could be used for crop cultivation. The valley floors and river banks also offer good land for cultivation as well as opportunities for hunting and gathering. At the higher elevations there is good pasture during the summer months and this whole region is one where herding and transhumance would be well adapted to the natural conditions.

Throughout the mountain zone there are places with mineral deposits of greater and lesser extent. Some of these were certainly of potential value to prehistoric man. For example, iron ore is found in the Devonian and Permian rocks of the northeast, especially around Kabul; copper is also found in this area, as is lead. Precious metals and stones—silver, jade, tourmaline and ruby—are available in many parts of the mountains but the most notable resource which we know was mined by prehistoric man, is the lapis lazuli of Badakhshan (see below, pp. 34-35).

**Table II:** Natural vegetation in the Central mountain zone and Nuristan

<i>Altitude</i>	<i>Characteristics</i>
Above 4270 m	None
3660-4270 m	Mountain meadows of short grasses and seasonally flowering plants.
3050-3660 m	Mountain scrub, grasses and seasonally flowering plants, small scattered bushes (juniper, dwarf willow, rosebay, tragacanth, euphorbia).
Up to 3048 m	Dry scrub, semidesert bushy plants (feather grass, wormwood, saltwort, tragacanth, camel grass, tamarisk) and scattered clumps of pistachio trees.
Forest zones of Nuristan and Paktya <sup>a</sup> 2438 or 2743 m to 3048-3352 m	Conifer forests of pine, cedar, fir, larch and yew with a few broadleaved trees (willow, poplar); ivy found only in Nuristan.
1371-1528 m to 2438-2743 m	Bushes and broadleaved forests of oak (including holly oak) with well developed undergrowth, and some walnut, alder, ash, juniper; above 1540-1828 m conifers included to form mixed forests.
Valley floors and river banks	Plane trees, poplar, willow and mulberry thickets; much bush growth where land not cultivated.

<sup>a</sup>Distinctive floral zones. Chart highly schematic. Because of the varied terrain within each zone, many local variations occur.

After Dupree (1973) p. 20.

## The Mountains and Foothills

The mountain and foothills to the south of the Hindu Kush slope gently from Kabul in the northeast towards the southwest. They form a transitional zone of plateaux between the high mountains and the lower dry uplands bordering the Indus valley. In the Kabul area are found several broad mountain valleys—notably the Kabul valley, the Kohistan-Panjshir valley and the Ghorband valley—that have long been important inhabited areas. On the southeastern boundary of the Kabul mountains, the Kabul river cuts a deep gorge through the mountains and flows into the open Jalalabad valley. Similar low-lying valleys, cut into the mountains bordering the Indus valley, are found further south.

During the winter snow lies at 1800 m and above and the temperatures throughout the region are generally below freezing with high winds increasing the chill factor. In the summer daytime temperatures rise to 13-18°C below 2100 m. Jalalabad is naturally considerably warmer; average July temperatures are around 33°C and in winter they fall to around 7°C.



Temperatures generally become higher as one moves southwestwards (see Fig. 1.4) although winter temperatures may well be near freezing even at Kandahar. Rainfall also declines to the southwest as one moves away from the Central mountains and the steppe vegetation merges into semi-desert.

Where the rivers emerge from the Hindu Kush there are opportunities for irrigated agriculture and more abundant pasturage. The whole region is suitable for herding activities and the different altitudinal zones allow a variety of foods to be collected or produced. The broad mountain valleys of the northeast offer a favourable environment for dry or irrigated farming and quick access to the resources of a variety of natural environments.

The northern foothills and mountains form a rather desolate area of plateaux and rounded hills with low steppe vegetation. The rocks are generally limestone, sandstone or shale and support only thin, stony soils. However, in the lower valleys flood deposits and loess form richer soils. The Andarab and Surkhab rivers combine in the Qunduz to cut through the main east-west mountains in narrow gorges but form wide broad valleys to north and south and provide a routeway to the Shibar pass across the Central mountains. As in the rest of Afghanistan the climate is dry and temperatures show a great range between winter and summer. The most favourable habitats for man are the river valleys where the combination of better soils and the availability of water provide a richer flora and fauna and better prospects for cultivation. The higher areas, however, still provide grazing and a poor living could be made by dry farming and herding or hunting and gathering.

In both the northern and southern mountains and foothills and especially in the Kabul area there are deposits of iron, copper and other minerals. Moreover these areas are generally within reach of the minerals of the high mountains and the salt deposits and gypsum of the plains and lowlands.

## The Plains and Lowlands

To the north and west the mountains and foothills give way to low, dry plains. The Turkestan plains are crossed by a number of rivers which eventually die out in the sands. However, loess blown off the Russian steppes is deposited in many areas of the plains and near the mountains and with irrigation forms a most fertile soil and easily worked building material. As one moves away from the mountains the stony soils give way to sandy desert and in some areas there are scattered dunes and dune fields. The climate is very variable, open as this region is to invasion by air-masses from the north and west. In the winter freezing weather is common but may be broken by interludes with temperatures around 18°C. Summer daytime temperatures can be extremely high (40°C) but at night fall abruptly. The rainfall is low and evaporation loss is high.

The Herat-Farah lowlands offer a slightly pleasanter environment. This area is a continuation of the Iranian plateau and the terrain is generally of low hills and broad basins and valleys. Rainfall is low (about 18 cm per annum in Herat) and the temperatures range from night frosts in winter to fierce daytime temperatures in summer (sometimes 45°C). The hill soils are generally poor and stony and to the west there are areas of salt pans and mudflats.

In both these areas there is pasture for animals though it is hardly plentiful, only around the rivers is there more abundant vegetation and good conditions for cultivation with the aid of irrigation.

## The Amu-darya and Helmand-Seistan Valleys

These two great rivers were used extensively for irrigation in the historic period and probably earlier. Both drain into inland seas and both are subject naturally to severe seasonal flooding. The floodplain along the lower course of the Amu-darya in Afghanistan is frequently marshy and separated from the desert by ill-drained alluvial terraces. In some areas there are salt flats. The Seistan basin lies at only 520 m above sea level and is an area of brackish marshes and fluctuating lakes. Much of the basin is covered with clay, silt, sand and gravel deposits from earlier lakes. The valley of the Helmand itself is separated from the deserts to north and south by low bluffs and, where it is not cultivated, is covered in low vegetation and tamarisk scrub.

The rivers and the lakes of the Seistan basin have fish and wildfowl which could have provided a useful source of food. The rivers themselves can obviously be used in irrigation and the frequent floods have laid down alluvial material that forms good soils. However, the hot dry climates lead to strong evaporation and careless irrigation can result in the formation of infertile saline deposits.

## The Deserts

The stony western desert (Dasht-i-Margo) and the sandy southern desert (Registan) lie on either bank of the Helmand. They are both true deserts with very little natural vegetation. Camel grass is the most frequent plant found. There are great diurnal ranges of temperature and despite cold nights the daytime summer temperatures reach 45°C or above. In the south there are dunes which constantly shift over the stony pebbles underneath. In the north there is little sand but vast expanses of black pebbles. At present neither of these deserts offers much sustenance to man or his beasts.

## Present Patterns of Subsistence

The present patterns of subsistence naturally differ not only between groups in different environments but between groups with different cultural histories. However, no attempt will be made here to describe in detail the ethnology of modern Afghanistan. The present population is a complex mixture of people who have migrated to Afghanistan at different times. The two largest population groups are the Pushtuns and Tadjiks who both speak Iranian languages. The Pushtuns are the dominant group south of the Hindu Kush, the Tadjik are found mainly in the northeast. The other major linguistic group is Turkic and is spoken largely by people of Mongol descent who are found in the northern plains. However, the Hazara

Mongols of the Central mountains also speak an Iranian language. There are a number of other ethnic or linguistic groups, notably the Nuristani, Aimak and Baluch. A detailed discussion of these groups can be found in Dupree (1973). Despite this variety of peoples and customs, for the purposes of this chapter a number of major patterns of subsistence can be usefully identified without reference to specific ethnic groups.

A high percentage of Afghanistan's population is rural. In the 1960s it was estimated that about 90% of the population was rural and about 15% were nomadic or semi-nomadic (Smith *et al.*, 1969). Fortunately for the archaeologist, modern techniques of farming have only recently been introduced into Afghanistan and in much of Humlum's book, using data from an expedition undertaken in the 1950s, he describes methods of subsistence that are probably comparable to those used in the prehistoric period. Moreover, since there is a considerable diversity in the ways of life of the people, including amongst them nomads, hunters and gatherers, farmers and urban dwellers, it is possible to find many modern analogues for ways of life that may have existed in prehistory. It seems plausible that in Afghanistan, as in Baluchistan and the Indus valley, the land-use systems in use today have remained virtually unchanged for several millennia (Leshnik, 1973).

The earlier section on climate should have made it clear that in Afghanistan the supply of water is the most critical limiting factor in the production of food by man. This applies not only to agriculture but also to the possibilities for gaining food by herding, hunting and gathering since plants and animals also must have water.

## Agriculture

As stated above some 75% of Afghanistan's population are sedentary rural dwellers and most of these will gain their subsistence through cultivation. Thus a map of the major cultivated areas is also a map of the areas with the densest population (Fig. 1.9). There is no accurate map of the distribution of population since there is no census and population figures are based on the estimation of the government. It is no surprise to see, first, that these areas are largely in the plains and lowlands or mountain and foothill zones surrounding the mountainous core and second, that they are mostly situated along rivers or at oases. The conditions for agriculture in these areas are broadly similar—the most important condition being the need for irrigation. Most sedentary agriculturalists in Afghanistan use some method of irrigation and there are two principal methods in use today apart from the modern schemes along the Amu-darya and Helmand.

The *qanat* or *karez* system is widespread to the south and west of the Central mountains (see Fig. 1.10). *Karez* are long underground tunnels which tap underground water near the foothills of the mountains and channel it down to the oases (Humlum, 1959). Some *karez* extend for more than 30 km though 8–16 km is more common. The tunnels are dug out by hand using simple tools and their lines are marked out on the surface by a series of holes surrounded by mounds of material thrown up from the excavation. *Karez* are found throughout Iran and also in Pakistan-Baluchistan. Their antiquity is not known although they were certainly used in Achaemenid and Sasanid times (English, 1966). The technology and

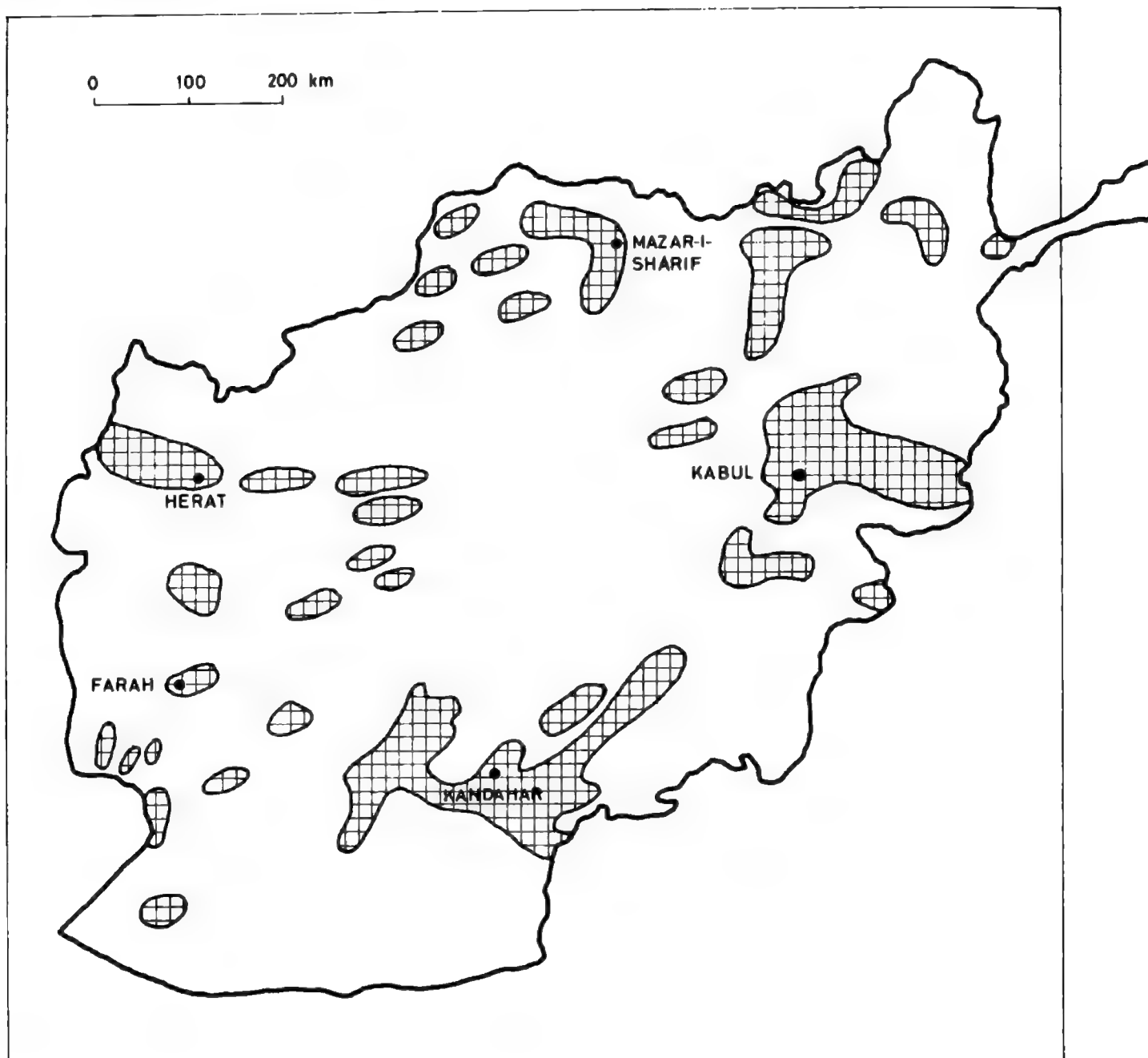


Fig. 1.9: Major cultivated areas (after Dupree, 1973).

tools required to construct them are simple, relying on gravity and manpower and their efficacy in bringing water is considerable. Once the water has reached the oasis it is distributed to the fields by means of ditches which are breached and fed into smaller channels when water is required.

The second major method of irrigation is to use the rivers. Water is diverted into canals (or *juis*) by means of small earth and stone dams placed upstream from the cultivated area, the water is then led by gravity to the fields. In the mountains the fields are often elaborately terraced and the water is fed amongst them by a complex system of small ditches (Fig. 1.11). This method of irrigation is widespread not only in the major lowland river valleys but also in the smaller mountain valleys; it is found throughout the Himalayan foothills and extends far to the east. It would certainly have been possible for small groups of prehistoric peoples living in

river valleys to irrigate in this way. However, in the great desert valley of the Helmand the successful large scale irrigation that once existed would have required cooperation amongst people living up and down the valley both to maintain the irrigation works and to administer the distribution of the water. Maintenance would have been important because of the river's seasonal flooding. In the north the Amu-darya and its tributaries are used extensively for irrigation and this is facilitated in areas with loess since it is a material from which it is easy to construct ditches and dams and when irrigated it forms a fertile soil.

The principal crops that are grown on these irrigated lands in the south at present are

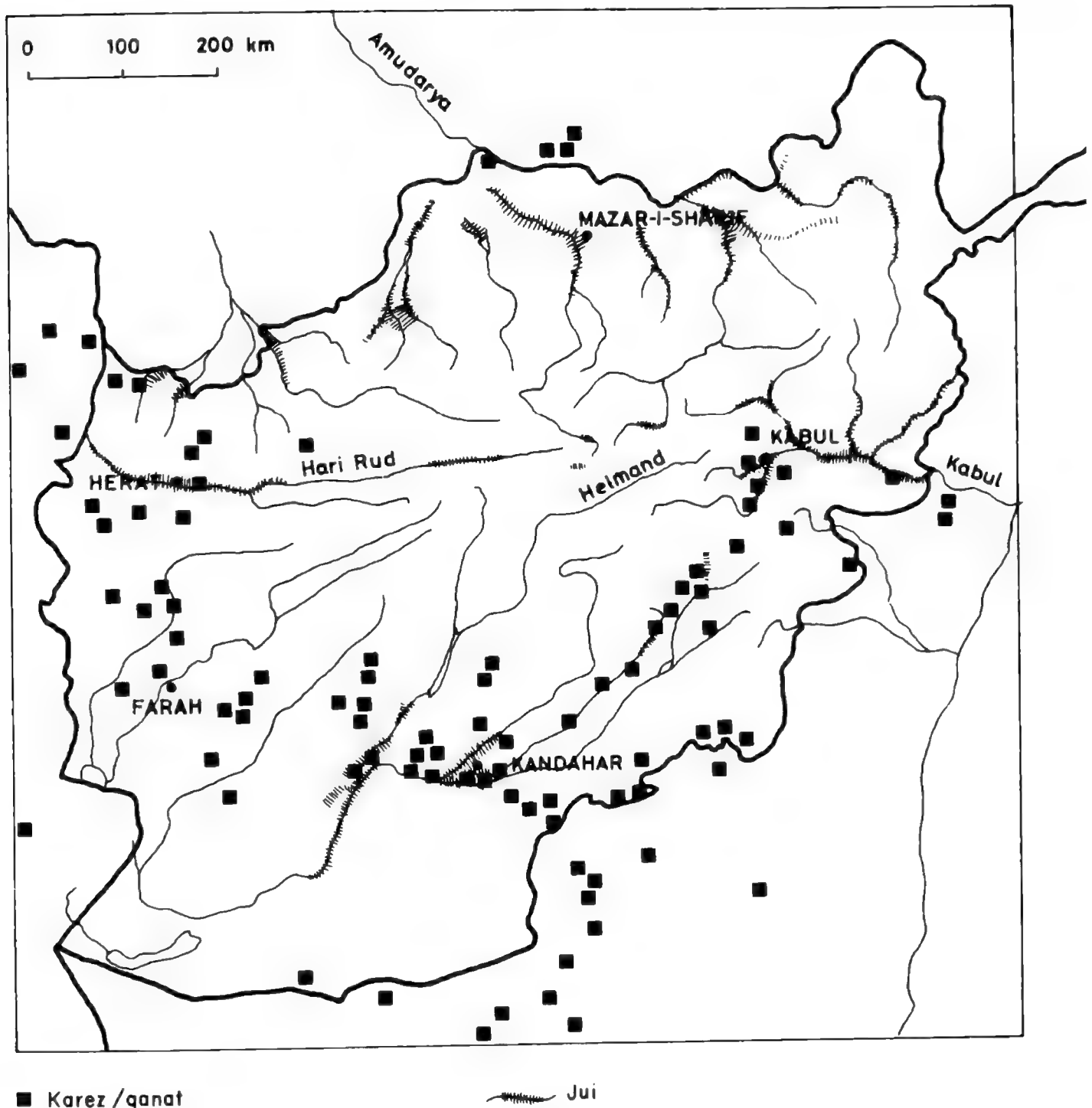


Fig. 1.10: Principal types of agricultural irrigation.





**Fig. 1.11:** Four levels of *jui* canals above the Ghorband river, near Charikar.

wheat, barley, lentils, beans and maize. The first three are harvested in the spring and the last two in the autumn. A variety of other vegetables and some cotton and oil plants are cultivated along with vines, fruit trees and melons. The vines are particularly important as the dried grapes form one of Afghanistan's principal exports. They are grown in trenches to protect them from the heat and to facilitate watering. In the areas irrigated from the rivers some rice may be grown and this crop is important in the northern irrigated lands along with cotton, wheat and sugar beet. Vegetables and fruit trees are grown in the north as in the south. Lentils, peas and beans are found as an important food crop throughout Afghanistan but wheat is undoubtedly the most important single food.

Although irrigation is such an important feature of agriculture, dry farming is also possible and is found especially in the mountains. Wheat is grown without irrigation here as a staple food crop and Humlum (1959) reports seeing it grown at altitudes of up to 3000 meters.

The farmers work with the aid of very simple tools. Humlum (1959) gives an excellent description of these along with line drawings and photographs. Before ploughing the field may be prepared by pulling over it a heavy piece of wood drawn by oxen to break up lumps of soil. The ploughs are also pulled by oxen and are made of wood with a metal tip. There are a variety of types, however none of them turn the sod but merely scratch a shallow furrow. Sowing is usually broadcast and generally a sickle is used for harvesting, while threshing is done by simply marching cattle round and round over the heaped up grain or occasionally by beating it by hand with a flail. For winnowing the grain is tossed into the air with a wooden fork and then sifted through a simple sieve. These tools, along with spades and shovels, complete the most important mechanical equipment of the farmer. His grain may be milled by hand but more often this is done in gravity-fed water mills. The fertility of the soil is maintained by leaving fields fallow for one or two years in three. When the fields are fallow, animals are sometimes put to graze on them thus providing manure which is later ploughed in.

The sedentary farmers in the oases, river valleys and mountains also keep livestock; these supply not only food but also material for clothes, dung for fuel and motive power for transport and farm work. Oxen are kept for ploughing and threshing and are also used as beasts of burden over short distances. They are fed through the winter on lucerne which is grown for the purpose. Cattle supply some milk but this is also obtained from goats which, along with sheep, feed on the natural scrub vegetation. Sheep are numerically the most important domestic animal in Afghanistan and, particularly in the north, supply fine pelts for trading. Throughout the country poultry are found scratching for food around the houses and their eggs and meat supply a valuable addition to the diet.

In addition to cattle, horses are used for transport in the north and in the Hindu Kush but in the south donkeys and mules are more common. Camels are used especially for long distance movement; both the one and two humped varieties are found; the former predominantly in the south, the latter predominantly in the north.

In the mountains transhumance is common. The men take the flocks up to high pastures in the summer leaving the women and old men to cultivate the fields, the men and flocks then return to the valleys with the colder weather.

There is thus a similar pattern of subsistence farming throughout the country, varying in detail with altitude and the abundance of water but centred around wheat and barley as the staple grain crops, with pulses and vegetables as further important additions to the diet. Livestock are an integral part of this farming system which also relies heavily on irrigation techniques.

Crops are raised for exchange as well as for subsistence and nowadays cash crops are growing in importance and some processing plants have been established in the countryside. Cotton, rice, sugar beet and oil crops are raised in the north and some cotton, oil crops and grapes in the south. Produce and livestock were traded before the modernization of agriculture began and allowed the sedentary farmer to acquire goods from far away. The nomads play an important part in this trade today and may well have played a similar role in prehistory.

It seems pertinent at this point to consider what aspects of the farming system of the past could be similar to the modern situation. Certainly the tools used today are not more



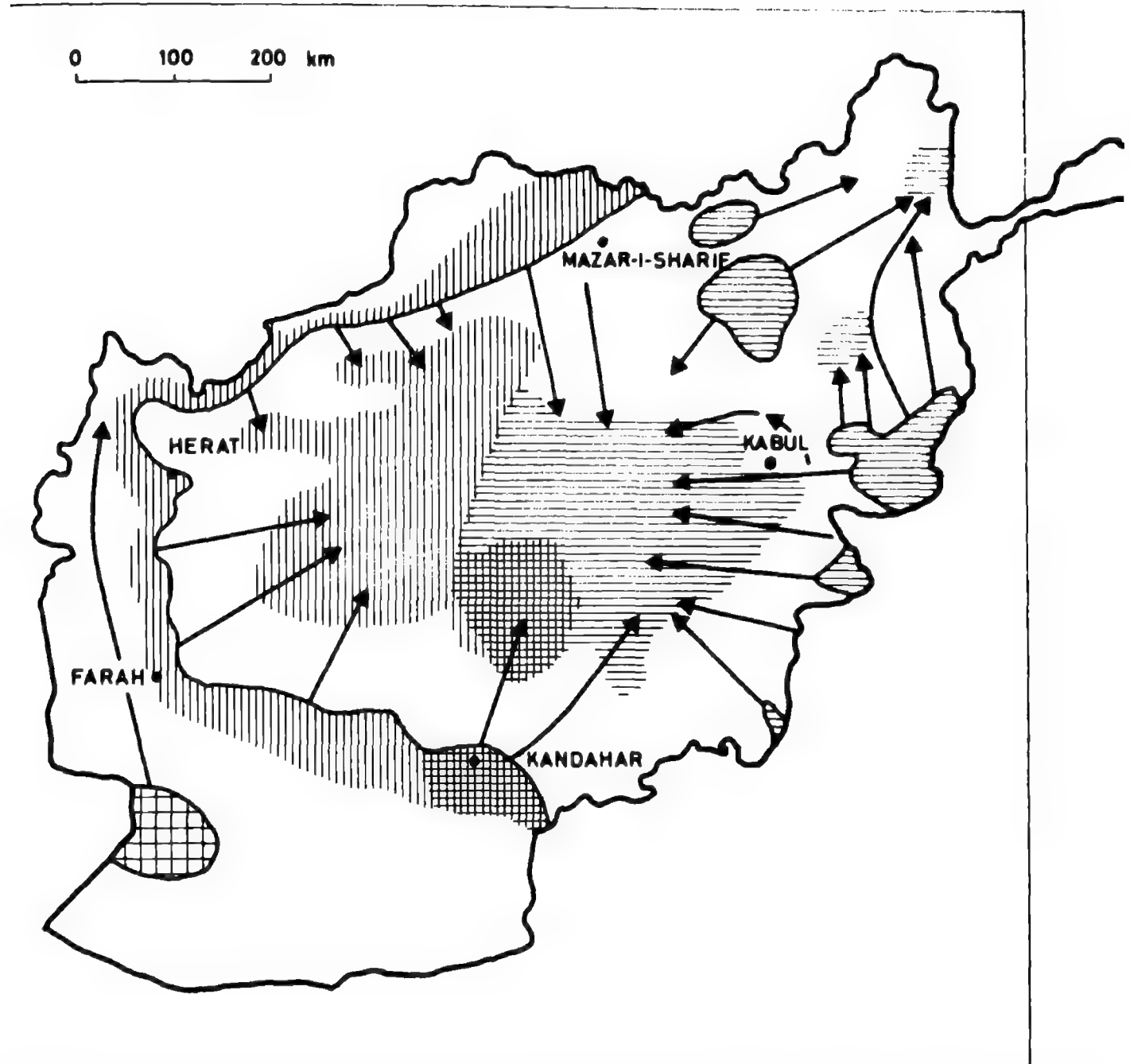
advanced than those that might have been used by an Iron Age farmer. Some of the crops grown today would have been unknown but many probably grew as wild plants in Afghanistan in the past as they do today. Vavilov (1951) suggested that the area of Afghanistan and Pakistan forms an independent cultural hearth for a variety of crops—notably the wheat, chick peas and beans that still form an important part of the farming system; moreover, most Afghans still use fairly primitive forms of wheat. The simple riverine system of irrigation would have been feasible for most prehistoric farming communities but the karez system is technically more difficult.

If we accept that the present farming system is not unlike that of the prehistoric farmers then data on the yields that are obtained today or on the population supported by a given cultivated acreage would give some indication of the population that could have been supported in the past but unfortunately there is little reliable data of this nature. However, Humlum, in studying the oasis of Pirzada which is irrigated by karez, found that samples from four fields showed a wheat yield varying from 4·7 to 14·3 quintaux/ha. A soil analysis suggested that these low yields were probably due to the primitive strains of wheat used and to disease rather than to a poor soil (Humlum, 1959, pp. 229–231). It certainly seems that these yields may be of a similar order to those that could have been attained by prehistoric farmers. In the north, Michel (1959) quotes wheat yields in Kataghan Province in 1956 of 1440 lbs/acre (approximately 13·2 quintaux per hectare). These yields were gained on loess and alluvial soils using river irrigation and simple tools for cultivation but employing organic fertilizer and a good rotation. Lastly, where dry farming is used in the higher areas Humlum suggests that the wheat yields may be only two to three times the seed sown although wheat grown by dry farming methods is said to have a higher protein content than that grown under irrigation. Michel (1959) quotes results from the wheat varietal test station near Kabul where local varieties of wheat gave yields of the order of 30–40 bushels per acre.

## Nomads

Not all the rural population of Afghanistan are sedentary farmers: there are groups showing all degrees of nomadism from the pure “herding” nomads to those who combine seasonal nomadism with the cultivation of crops. Many groups adjust their degree of nomadism to fluctuating economic or climatic circumstances. Some groups move over very short distances while others migrate up to 1000 km between summer and winter pastures. Ferdinand (1959) distinguishes two main groupings of nomads—those of the south and west and those of the east. These divisions correspond to broad cultural divisions as well as to contrasts in the environment. In both areas one encounters “pure” nomads and semi-nomads while in the east there are also groups who are essentially migratory farm workers with herds and groups who move in a rather restricted area within the forested mountains of Nuristan.

The “pure” nomads’ principal means of livelihood are their herds of sheep and goats which supply food, fuel, material for clothes and shelter and goods for exchange with the farmers and traders in the towns. They move from winter pastures in the uplands along the southern border to summer pastures in the central mountains (see Fig. 1.12). Although their animals



**Fig. 1.12:** Seasonal movements of nomads (after Dupree, 1973). Key: black lines: approximate limit of winter pasture lands; arrowed lines: direction of spring migration routes; narrow vertical hatching: grazing area of western Pushtun (mainly Durrani); narrow horizontal hatching: grazing area of eastern Pushtun (mainly Ghilzai); wider crosshatching: Baluch winter quarters (other Baluch mingled with Pushtun in the north).

supply them with so much they are not self-sufficient and depend on exchange with the sedentary population to get many tools and manufactured objects in addition to articles of diet. According to Ferdinand (1959) the nomads of the south and west are less dependent on such trade than those of the east and southeast.

Some nomads are primarily traders although they also keep herds. These groups are found mostly among the eastern nomads and play an important part in the economy of central Afghanistan, bringing goods from Pakistan into the central mountains for trading with farmers

and other nomads (Fig. 1.13). Much of the trade is done at four large "fairs" in the Tchahar-Aimak area in Herat province. The traders bring in clothes, sugar, tea and metal wares and exchange these for money or for wheat, butter and animals.

In the Jalalabad area there are nomadic groups who spend the winter in the valley sometimes living in houses, near or in villages where they perform odd jobs in return for living space and who then move off towards the uplands in the late spring to harvest the crop in other villages along their route. In return for this they get a share in the crop and freedom to put their herds in fallow fields, thus improving the soil fertility. They spend the summer with their flocks in villages in the uplands and return to their winter quarters in the autumn. Their herds consist largely of cows and donkeys with some sheep, goats and chickens.

Yet another type of nomadism is found in the eastern mountains of Nuristan. Here are found herders of goats who live in their winter quarters on the lower edge of the forest where they build huts of stones, earth, branches and straw to protect themselves against the bitter cold. In summer they take their tents and move up to the treeline. They exchange milk products, wool and animals for wheat and other foods and manufactured goods.

Lastly, in the south and west are semi-nomads who cultivate their own land and live



**Fig. 1.13:** Nomads near Kabul.

during the winter in settled villages but who move away to the mountains with their herds during the summer months after planting their crops and return in time for the harvest. In times of plentiful rain they may concentrate on farming but during bad years their flocks offer an alternative means of livelihood and it may be that during dry periods such semi-nomadism increases (Ferdinand, 1959, p. 287).

It is not always easy to categorize the various nomadic groups since they may adjust their habits to economic circumstance. It is clear that they form an important part of the economy of the sedentary farmers and that their trading activity is important. Study of their ways of life offers some ideas on possible relationships between nomads and farmers in the past and suggests what a wide range of adaptation to local environments and economic opportunities is possible.

The forms of shelter used by both the sedentary and nomad population are closely related to the local environment and the people's economy. The different nomadic groups use a great variety of tents; some are made from woven wool, others from hides; some are stretched over wooden supports, others use rough stone walls as well as timber. The sedentary population also lives in a variety of dwelling types ranging from caves to large houses built of sun dried brick. In the mountains stone is often used while in the desert areas mud bricks are more common. What is evident is that there is no lack of local material for providing shelter whatever the level of technology available.

Whilst the general patterns of subsistence in Afghanistan have been outlined it is important to remember that there are many variations depending upon the local environment. For example, in Seistan the Sayyid population net fish and migratory birds as the major part of their food supply; in Nuristan, gathering of wild plants has an important part in the economy. Again, the division between sedentary agriculture and nomadism is not firm and groups may shift the emphasis from one to the other depending on changing local circumstances of climate or economy.

## Opportunities for Trade

Afghanistan's position gives it opportunities for trade with a variety of different areas. On the whole it does not possess any outstanding natural endowment or rare commodity but in the 1950s and 1960s fresh and dried fruits, karakul, skins, raw wool and cotton, carpets, rugs and sheepskins were some of the principal items produced for trade abroad. Sugar and tea, textiles and manufactured goods were bought in return (Wilbur, 1969). We have seen how the nomads trade in animal products and grain for goods from Pakistan and beyond. Thus, Afghanistan is now a producer of primary products and an importer of finished goods. This pattern may also have occurred in the past. Afghanistan's position makes it a natural focus for routes between East and West and between India and the North. In the past the Silk Route ran across the north of the country through Balkh. Routes also went up the Khyber pass from the Indus valley towards the north and east (Fig. 1.14). In the south routes skirting the central mountains along the line of the present road led to Quetta and the Indus from the north-east via Ghazni and from the Iranian plateau via Herat and Kandahar. The Helmand valley also



provides a southward link from the central mountains to Seistan and on to the passes across the desert mountains to the Gulf of Oman and Straits of Hormuz, thus this route could have linked with coastal trading routes to Mesopotamia and the Indus.

One rare commodity produced in Afghanistan that is known to have been traded in the past is the lapis lazuli of Badakhshan (Herrmann, 1968). Lapis lazuli is not a common mineral and the only other known sources for supplying the Middle East are in the Pamirs, Lake Baikal



Fig. 1.14: The ancient route through the Hindu Kush from Bamiyan to Kabul.

and a possible source in Iran in Azerbaijan and possibly in Kerman as well. The Lake Baikal source produces stones of an inferior quality to those of Badakhshan and was probably of far lesser importance in antiquity than the Afghan source. The Pamir deposit is at about 3300 m and is extremely difficult of access while the Iranian source, if it existed, has evidently been worked out. Herrmann concludes, after reviewing the evidence, that the Badakhshan lapis lazuli was the principal source for an important trade with Mesopotamia that flourished from about 3500 B.C. This is evidence of the extent of trading links that could be established in the ancient world and the distance that valuable goods might be transported. It is probable that this trade was not direct and that the Afghans used Shahr-i-Sokhta as an entrepôt where they exchanged the lapis lazuli for goods from nearer at hand than Mesopotamia. However, Mesopotamian or even Egyptian goods of value may well have returned by the same route.

The Badakhshan mines are hardly easy of access. The ones presently known lie above the Kerano-Munjan valley at Sar-i-Sang, Stromby, Chilmak and Robat-i-Paskaran. The valley is narrow and steep with scanty vegetation and few permanent settlements. The mines can only be reached by precipitous paths along which all materials for mining must be carried. In the past the mining was done by fire-setting. Fuel and water were carried up to the mines, a fire was lit beneath the face to be quarried and then cold water was thrown onto the heated rock to make it crack. The lapis was then extracted by using picks, hammers and chisels. The provision of fuel and water for the mines must have involved great labour in amassing the fuel and transporting it and this is suggestive of the value of the stone in the past. Once quarried the lapis could be taken south to Kabul and beyond via the Anjuman pass and Panjshir valley, to the north and west via Faizabad or to the east along the Wakhan corridor.

The evidence suggests that the prehistoric peoples of Afghanistan are unlikely to have been isolated from contacts with other peoples or from the opportunity for trade despite the problems of travel across desert and mountain barriers. Indeed its position would have encouraged such contacts and the development of trade.

## Summary

A highland country surrounded by lowlands and lying at the crossing point of a number of important natural routeways, Afghanistan had considerable advantages in the past as a locale for trade and exchange. The products of the mountains could easily be exchanged for both manufactured and primary products from the Indus or from Iran and the west. The diversity of people at present inhabiting the country bear witness to its openness to migration and invasion in the past.

Within the country itself the aridity of the climate means that cultivated areas are located either in the upland valleys or along rivers in the lowlands. Irrigation techniques are a particularly important aspect of agriculture. However, there are a great variety of natural habitats and a feature of modern Afghanistan is the diversity of methods of subsistence including nomadism, hunting and gathering and settled agriculture. Because of the strong relief quite different environments can be found relatively close together. This feature would have been particularly helpful to Palaeolithic groups with their limited technology and small

size. It must also have been important at times of climatic change since groups could slowly move from areas with deteriorating climatic conditions to more favourable ones, without the need to move far. This variety of habitats is a feature that is likely to have encouraged trade and exchange within the country.

Lastly, it must be stressed that data on the nature and distribution of resources in Afghanistan during the archaeological period are extremely scanty. The picture presented above may be modified substantially as further research is undertaken.



# The Palaeolithic

*Richard S. Davis*

Before 1951 the Palaeolithic period in Afghanistan was almost unknown; Afghanistan was blank space on the Palaeolithic map. It was never predicted, of course, that Afghanistan would prove to have been unknown to Palaeolithic hunters and gatherers, and probably most Asian prehistorians in the early 1950s would have expected that evidence for at least Middle and Upper Palaeolithic occupations would eventually turn up. The twenty years since that time have clearly established the presence of Middle and Upper Palaeolithic sites and very recently tentative evidence for the Lower Palaeolithic has been discovered. Observers of the Palaeolithic scene, however, could not have predicted the nature of these Palaeolithic adaptations in Afghanistan, and this chapter is intended to survey the evidence and to relate it to known Palaeolithic occurrences in surrounding regions.

In this presentation the Palaeolithic is divided into four successive phases: Lower, Middle, Upper, and Epi-Palaeolithic. The last two terms are collectively referred to as the Late Palaeolithic. This terminology eliminates the need for the "Mesolithic" which has often been an ambiguously used term, and is used by few prehistorians in Southwest Asia. Although the term Palaeolithic had its genesis in the nineteenth century as a technological and chronological term (chipped stone tools from the Ice Age) its use here is in the economic sense, i.e. all food is procured by hunting and gathering.

It must be made clear from the outset that the present boundaries of the political entity known as Afghanistan have no special relevance to the distribution of Palaeolithic populations. It is the case that portions of Southwest Asia, Central Asia, and South Asia meet in modern-day Afghanistan, and the prehistorian, therefore, should be aware of Palaeolithic developments in all three areas. In this discussion of the Afghan Palaeolithic it will be necessary, therefore, to refer to archaeological discoveries which have been made outside the boundaries of Afghanistan.

Currently, Afghan prehistory poses several problem areas and the solution of these problems will continue to occupy prehistorians for years to come. It should be remembered that Palaeolithic studies in Afghanistan are at a very early stage, and future research efforts should be organized and coordinated with some purpose in mind in order to avoid filling even more storerooms with the remains of desultory excavations.

## Problem Areas

- I. When and under what conditions was Afghanistan initially occupied by hominid hunting and gathering populations?
- II. Which environmental zones were exploited during the Palaeolithic, and how did climatic fluctuations of the Pleistocene effect the settlement of particular areas?
- III. To what extent were particular regions continuously occupied during the Palaeolithic and what factors can account for any observed temporal gaps?
- IV. What subsistence and technological patterns are known from the Afghan Palaeolithic, and what is the evidence for changes in these patterns in response to local environmental fluctuations and other factors?
- V. What part did the Late Palaeolithic hunters and gatherers play in the early domestication of sheep and goats and in the cultivation of barley?

These problems are all potentially answerable within certain constraints, and their solutions will have considerable relevance for understanding the dynamics of the hunting and gathering way of life. What follows is a review of all the important Palaeolithic data from Afghanistan with some incomplete answers for the above questions.

## Brief History of Palaeolithic Research in Afghanistan

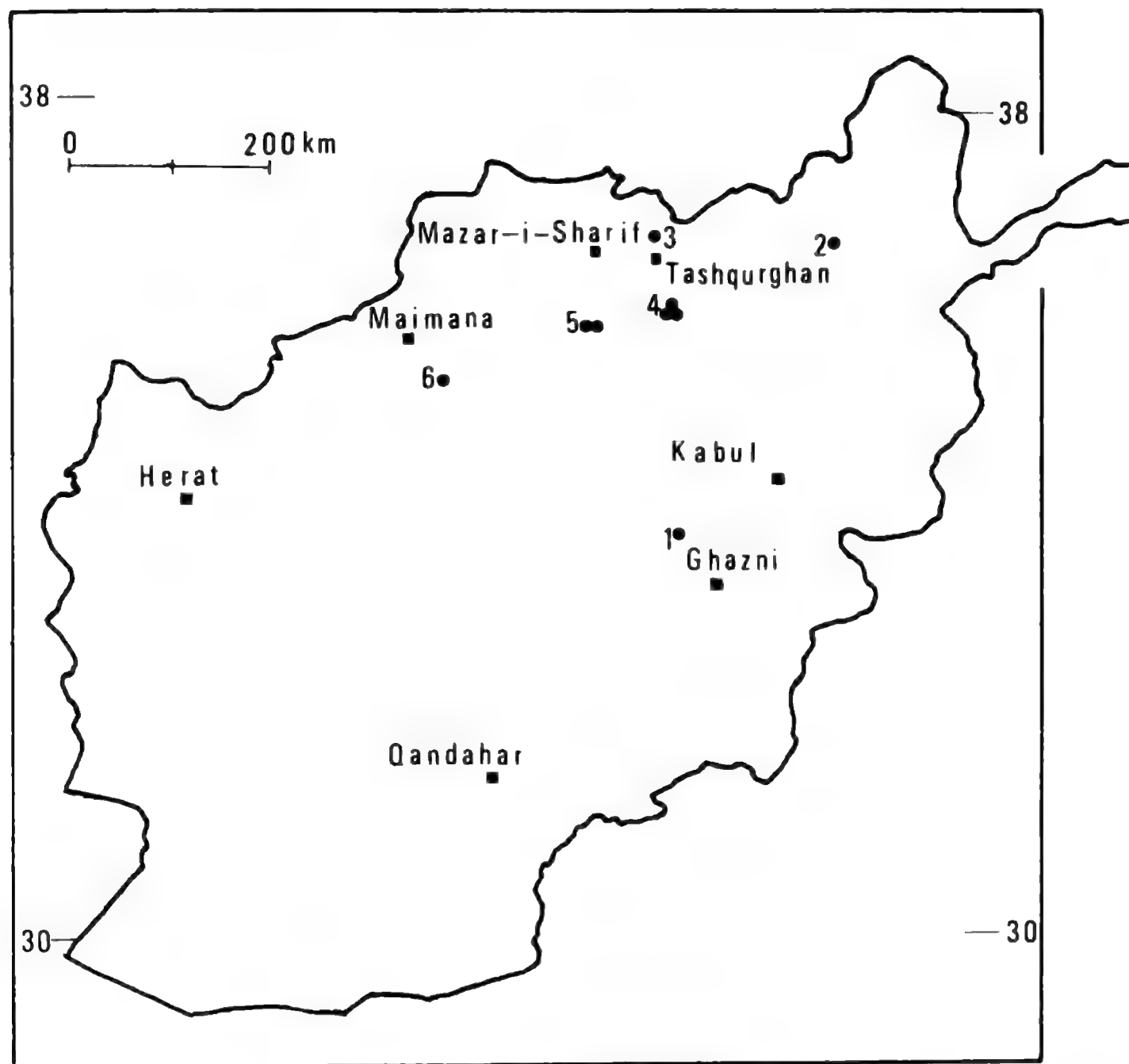
The first discoveries of Palaeolithic remains in Afghanistan were made in 1951 (Allchin, 1953) and in April of 1954 by Carleton S. Coon, then of the University of Pennsylvania. A narrative account of his travels and excavation in Afghanistan is recorded in his book, *Seven Caves* (Coon, 1957). Coon motored north from Kabul over the Hindu Kush to Haibak, a provincial capital. His geologist had noted a large number of limestone outcrops in this area, and it appeared to be a good search area for Palaeolithic cave sites. Coon soon located a rockshelter named Kara Kamar and began excavations. Coon rapidly completed his work at Kara Kamar and returned to Kabul where his Palaeolithic collection was divided with the Kabul Museum.

In the autumn of 1959 Louis B. Dupree, a major figure in Afghan studies from the Palaeolithic to the present, made a general archaeological reconnaissance of northern Afghanistan, and he was successful in identifying several Palaeolithic localities which he later excavated (Dupree and Howe, 1963). In Badakhshan Province he located a Middle Palaeolithic rock shelter called Dara-i-Kur which he excavated in 1966. In Balkh Province he discovered three Epi-Palaeolithic localities near the town of Aq Kupruk. The sites consisted of two rockshelters (Aq Kupruk I and II) and an open-air site located on a low river terrace of the Balkh (Aq Kupruk III). These sites were excavated in 1962 and 1965.

S. M. Puglisi, Director of the Instituto di Paleontologia, University of Rome, and part of the Italian archaeological mission to Afghanistan, conducted a survey in the vicinity of Haibak. Approximately 20 km southwest of Kara Kamar he located a rockshelter in the dry wadi Dara-

i-Kalon, and he made a small test excavation in 1965 from which he recognized two distinct Epi-Palaeolithic assemblages (Alessio *et al.*, 1967).

Dupree and I revisited the Haibak region in the summer of 1969 with a geologist, Laurence Lattman of the University of Cincinnati. We located one Epi-Palaeolithic surface site (Kok Jar) about 3 km from Puglisi's test. During the same summer and in the following summer as well, I visited all of the above archaeological sites, and made further reconnaissance in surrounding areas. Subsequently, I studied all of the Late Palaeolithic archaeological assemblages and subjected them to an extensive analysis (Davis, 1974). I also



**Fig. 2.1:** Locations of Palaeolithic sites in Afghanistan. 1. Dasht-i-Nawar. 2. Dara-i-Kur. 3. Tashkurghan 40. 4. Haibak Area—Kara Kamar, Kok Jar, Dara-i-Kalon. 5. Aq Kupruk. 6. Ghar-i-Mordeh Gusfand.

had the opportunity to study Late Palaeolithic collections in Samarkand, Tashkent and Dushanbe in Soviet Central Asia.

In 1969 and 1970 Philippe Gouin of the *Délégation Archéologique Française en Afghanistan* made archaeological surveys north of the Hindu Kush on the very arid steppe north of the Tashkurghan Oasis. He located one Epi-Palaeolithic site which he has reported in preliminary form (Gouin, 1972).

The most recent archaeological discoveries were made by Dupree south of the Hindu Kush in the Dasht-i-Nawar region. There, on ancient lake beaches he collected surface concentrations of Middle and possibly Lower Palaeolithic artifacts (Dupree, 1974).

The approximate locations of all the above sites are indicated in Fig. 2.1. One may summarize this prolegomenon by stating that practically no one who has actually looked for Palaeolithic sites in Afghanistan has failed to find them, but with no exception has there been anything other than preliminary survey and excavation. We can hope that in the near future the necessary combination of expertise, governmental permission, and funding can come together to make possible some long-term and intensive Palaeolithic research programmes.

## Initial Occupation of Afghanistan— The Lower Palaeolithic

At present, the evidence for occupation of Afghanistan prior to the Middle Palaeolithic rests on the discoveries made by Dupree in the summer of 1974 on the ancient shores of the Dasht-i-Nawar, a large and shallow brackish lake in the margins of the Hindu Kush in Ghazni province (Dupree, 1974). In a brief survey of the beaches to the east and north of the lake, Dupree found concentrations of quartzite tools from which he identified the following implement types: cleavers, large scrapers, choppers, chopping tools, and pebble tools. According to Dupree, these finds represent a Lower Palaeolithic industry. To be sure, it is essential that careful geological work must be done in this area, and also it is hoped that further reconnaissance will reveal Lower Palaeolithic tools in association with a faunal assemblage. Nevertheless, Dupree's discovery and typological assessment is exciting, and it is reasonable to suppose that the Dasht-i-Nawar area will reveal more evidence for Lower Palaeolithic occupation.

The nearest reported manifestations of the Lower Palaeolithic to Afghanistan are the Soan of Pakistan (Allchin and Allchin, 1968: 59), the pebble tool and flake industries of Soviet Central Asia (Lazarenko and Ranov, 1977) and the Ladizian of Iranian Baluchistan (Hume, 1976). All of these finds are relatively close to the Afghan border, and more significantly, in several areas there seems to have been a reasonable continuity of habitat into Afghan territory. It won't be very surprising, therefore, if Afghanistan someday yields good evidence for Lower Palaeolithic occupation. Exactly what kind of stone tool industries eventually will be found is another question. Industries with or without handaxes are certainly possible, but it will be even more interesting to learn how these suspected Lower Palaeolithic hunters and gatherers actually adapted and responded to the range of conditions in Afghanistan.

# Middle Palaeolithic

## Sites

Dara-i-Kur  
Ghar-i-Mordeh Gusfand  
Hazar Sum valley  
Kara Kamar II, IV  
Dasht-i-Nawar

## Carbon-14 Determinations

Dara-i-Kur (Dupree, 1968)

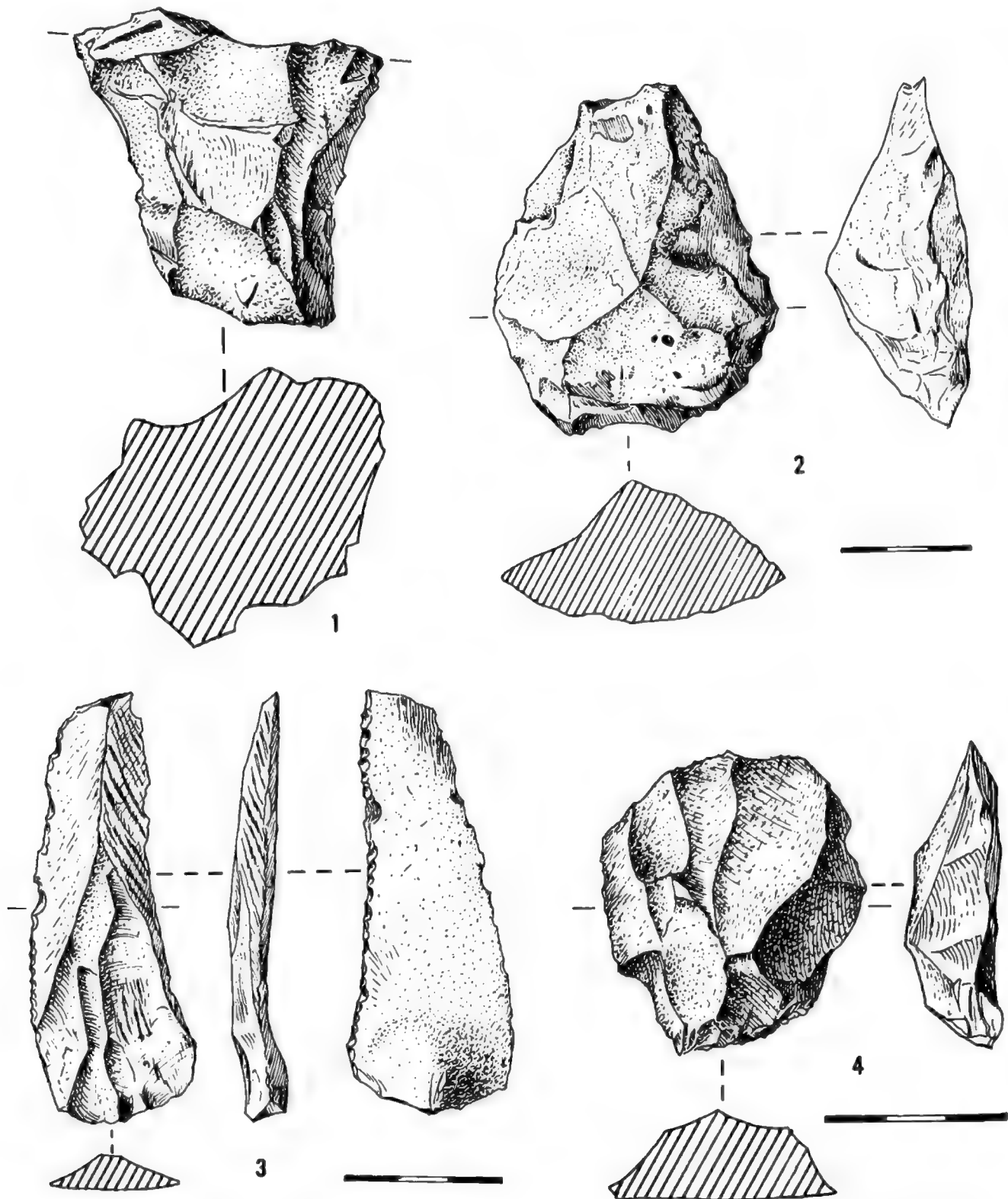
GX 1122 30,300  $\pm$  1900, — 1200 b.p.

Although several localities in Afghanistan have been classified as Mousterian or Middle Palaeolithic, only one, Dara-i-Kur can confidently be called Middle Palaeolithic. My recommendation is the term "Mousterian" should be avoided in Afghanistan unless it can be demonstrated that there is some direct relation to the type site in southern France. The term Middle Palaeolithic is less evocative and certainly makes fewer assumptions about the nature of Palaeolithic culture groupings. The provisional definition for the Middle Palaeolithic in Afghanistan is: early Würm flake industries with discoidal and/or Levalloisian flaking technique.

Dara-i-Kur is a stratified rock shelter site located near the village of Chanar-i-Gunjus Khan in Badakhshan Province. The shelter is located high up on the side of a valley and commands an excellent view of the surrounding countryside. There were major ancient rockfalls in the shelter which made excavation difficult. The Middle Palaeolithic implements (Figs 2.2, 2.3) were found in overbank deposits of silt and clay, which were laid down by an ancient stream which ran close to the shelter. The C-14 determination given above was made on several small fragments of charcoal from a hearth disturbed by water action. It is strongly suspected that some post-Middle Palaeolithic charcoal was mixed in the dated sample, thus rendering the determination too young. Undisturbed hearths and Middle Palaeolithic deposits probably exist buried beneath the massive roof fall. Dupree and I have already published a preliminary description of the lithic material (Dupree and Davis, 1972), but several general observations can be made in addition. The Middle Palaeolithic layer produced approximately 800 lithic specimens. There is definite evidence of Levalloisian technique in the form of Levallois Blade cores (Fig. 2.2, No. 4), but the predominant flaking technique was discoidal. Discoidal cores were numerous, and the majority of them were small in size and were well struck (Fig. 2.2, No. 2). Multiple platform cores were also found (Fig. 2.2, No. 1). A striking feature of this industry was the relatively high incidence of blades (Fig. 2.2, No. 3). Irregularly or partially retouched artifacts were by far the most frequent implements. There appeared to be only rare side scrapers, no hand-axes, and few "Upper Palaeolithic" types.

The material used was a variety of basalt which does not fracture well conchoidally. The lithic collection has not been completely analysed, and it is, therefore, impossible to quantify the above observations.

A hominid incomplete right temporal bone was found associated with the lithic material. This specimen has been analysed by J. Lawrence Angel at the Smithsonian Institution (Angel,



**Fig. 2.2:** Dara-i-Kur, Middle Palaeolithic. 1. Flake core. 2. Discoidal core. 3. Retouched blade. 4. Levallois blade core.

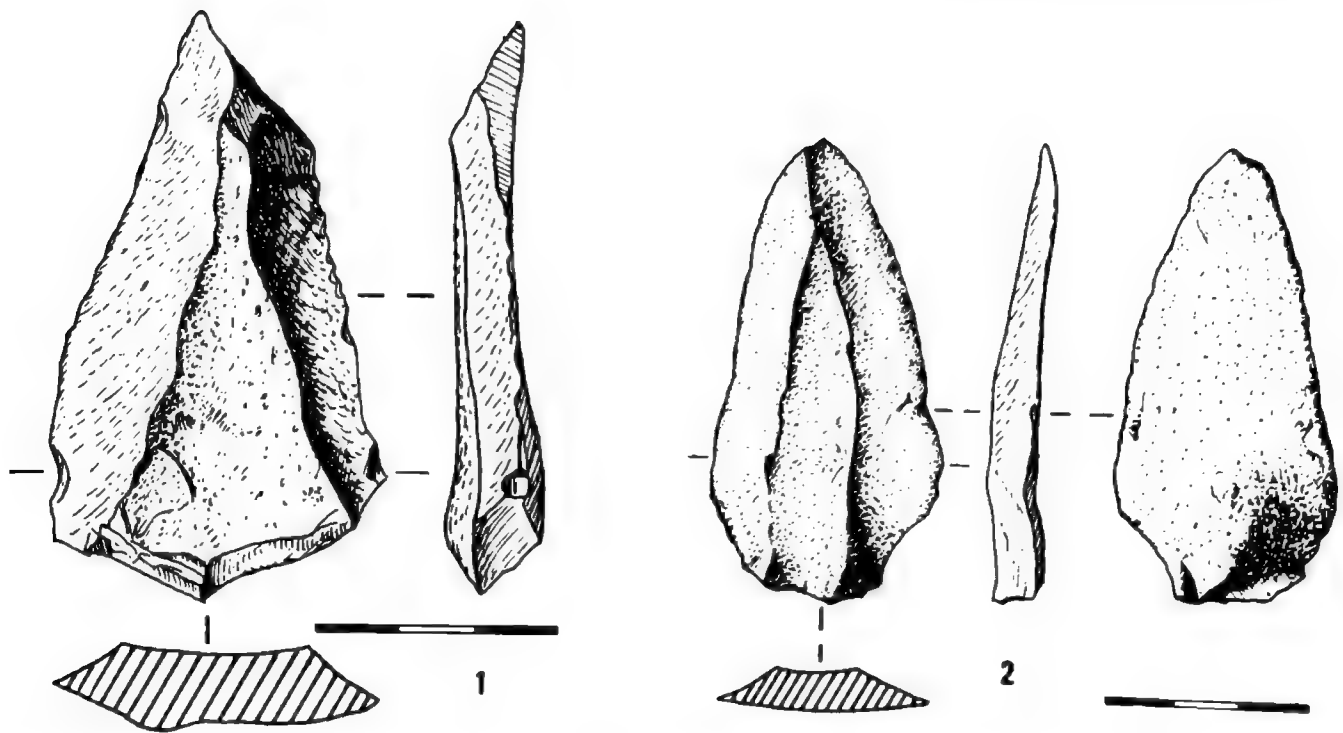


Fig. 2.3: Dara-i-Kur, Middle Palaeolithic. 1. Levallois point. 2. Triangular point.

1972). It represents the only known hominid material found in Palaeolithic context in Afghanistan. Angel compared the specimen to both Neanderthal material and modern *Homo sapiens sapiens*, and he concluded that it is nearer to modern man than Neanderthal in terms of the morphology of the tympanic bone, but that it would fit into a ‘partly’ Neanderthal population like the Es-Skhul cave specimens from Mt Carmel in Israel as well as into a modern population (Angel, 1972, p. 56).

The Middle Palaeolithic layer revealed some faunal material which has been identified by Dexter Perkins as sheep, goat, and possibly a large bovid. This is a significant discovery because all known later Palaeolithic hunting and gathering groups also hunted these animals, particularly sheep and goat. It is possible, therefore, that a basic hunting adaptation to particular species existed in the Middle Palaeolithic, and it continued on until the end of the Palaeolithic. It is interesting to note in this regard that at the Middle Palaeolithic site of Teshik Tash in Uzbekistan S.S.R., Siberian Mountain Goat (*Capra siberica*) accounted for 96% of the identified large mammal bone (Movius, 1953, p. 399).

A very different situation was found at a large rockshelter locally called Ghar-i-Mordeh Gusfand (Cave of the Dead Sheep) in northwest Afghanistan. Here, preliminary excavations by Dupree in 1969 revealed what appeared to be a Middle Palaeolithic industry made out of a poorly silicified limestone (Dupree *et al.*, 1970). The rockshelter itself was enormous, measuring approximately 300 m across the dripline and approximately 100 m deep. There was a tremendous rockfall at the front of the shelter—presumably the one responsible for all the dead sheep! After the preliminary report was published, a large trench was excavated in the summer of 1970 in the rear of the shelter. The results of that excavation cast considerable doubt on the original interpretation of the lithic tools as belonging to a Middle Palaeolithic industry. Although the tools were artifacts, their stratigraphic position does not indicate



sufficient antiquity for an early Würm occupation. For the present we can rule out Ghar-i-Mordeh Gusfand as a confirmed Middle Palaeolithic locality.

In Balkh Province near Aq Kupruk, C. B. M. McBurney of Cambridge University has recently reported the presence of Middle Palaeolithic material. He made a trial excavation in a deposit of "red cave earth" which revealed a "middle Mousterian" type of industry (McBurney, 1972, p. 25). The material has not yet been described in any detail, and it cannot be commented on further here.

Further to the east, in the Hazar Sum valley near the town of Haibak, S. M. Puglisi has noted the presence of surface material which he has described as Mousterian (Puglisi, 1963, p. 3). He found stone tools made from the locally abundant nodular flint which he interpreted as being manufactured according to Clactonian, Levalloisian, and Mousterian techniques. None of the implements illustrated in his report, however, were necessarily manufactured by any of the above techniques, and my own surveys in this area revealed no certain indications of Middle Palaeolithic industries. There was, however, a tremendous amount of chipped flint along several wadi terraces in the Hazar Sum valley. It consisted of the chipping debris of both Palaeolithic and post Palaeolithic peoples who utilized the nodular flint outcrops on the sides of the wadi channels. No doubt Palaeolithic hunters and gatherers, Neolithic farmers, and recent nomadic pastoralists have all made use of the excellent nodular flint from this area.



Fig. 2.4: Kara Kamar. Arrow indicates location of the shelter.

Adjoining the Hazar Sum valley is the site of Kara Kamar (Figs 2.4-2.8), excavated by Coon in 1954. Kara Kamar is a small rockshelter located about 135 m above the valley floor (See Fig. 2.4). The first and third cultural layers have been assigned to the Late Palaeolithic and will be described in some detail in a later portion of this chapter. The second and fourth layers have been identified by some prehistorians as Middle Palaeolithic. Coon, however, left the identity of the flint knappers of these two layers an open question. In an article on Upper Palaeolithic origins, Louis Pradel (1966) cites Kara Kamar for possible evidence of temporal overlap between Middle Palaeolithic and Upper Palaeolithic:

At Kara Kamar (Afghanistan) Upper Palaeolithic material may also exist, situated between two Mousterian layers. . . . This information, however, lacks precision.

After an examination of the available material from layers two and four at the Kabul Museum, it is clear to me that Pradel's last sentence is quite an understatement. There simply is no good evidence that this material should be described as Middle Palaeolithic. The inventory of the existing components of the industries in question are given in Table I, and Fig. 2.5 shows several implements from Level II.

The cores from Level II were multi-platformed flake cores, and none of them could even remotely be described as discoidal or Levalloisian. There were no Levallois points, flakes or blades in the collection. The collection was too small and the modified pieces too undiagnostic for any definitive classification. The single Carbon-14 determination made from a contaminated sample has such a great standard deviation that it is of no use in the chronological placement of this industry.

Only ten flints were recovered from Level IV. There was one edge retouched flake, one use retouched flake, two blades, five flakes, and one core fragment in the collection. Coon (1957: 249) has observed that Levels II and IV are similar in flint lithology and in debitage techniques, and my own inspection of the materials in the Kabul Museum yielded a similar conclusion. It is evident that the collection from Level IV cannot be assigned to the Middle Palaeolithic with any degree of certainty. It simply remains an unknown.

In addition to the Lower Palaeolithic finds already mentioned at Dasht-i-Nawar, Dupree also discovered some Middle Palaeolithic concentrations of tools on the ancient beaches of the lake. He noted similarities between the typology of the Dasht-i-Nawar material with the industry from Dara-i-Kur (Dupree, 1974). Further survey and excavation is definitely indicated in this potentially extremely important region.

## Discussion

The above descriptions of the various alleged Afghan Middle Palaeolithic sites must inevitably leave the reader with the impression that there is a high degree of uncertainty and lack of knowledge about this Palaeolithic phase. We may be quite certain, however, that the presence of Middle Palaeolithic populations is established; the materials from Dara-i-Kur irrefutably demonstrate that. Of the other sites mentioned above, it is apparent that they are either definitely not Middle Palaeolithic (Kara Kamar, Ghar-i-Mordeh Gusfand), or need

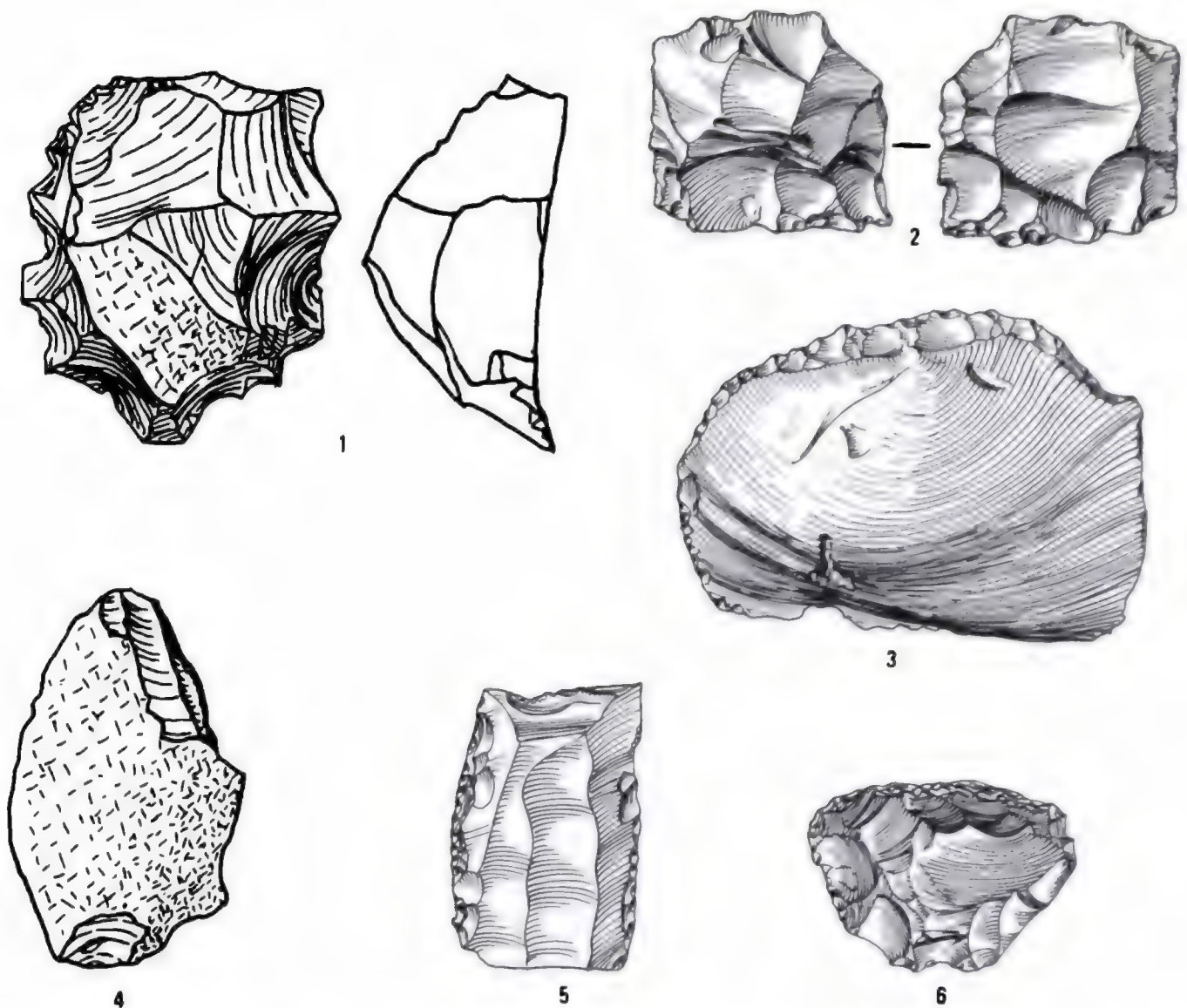
Flake and Blade Component

<i>Industrial divisions</i>		<i>AK II</i>	<i>AK IIIA</i>	<i>AK IIIB</i>	<i>KK I</i>	<i>KK II</i>	<i>KK III</i>	<i>KJ</i>
I.	Nodules	—	—	—	1	—	—	—
II.	Cores							
	flake	5	5	1	2	3	7	—
	bladelet	—	—	—	—	—	5	—
III.	Waste							
	core frag.	11	35	5	2	10	4	15
	chunks	10	—	—	—	—	—	—
	spalls	14	5	—	—	—	—	—
	ret. flakes	333	155	18	—	—	—	15
	“scrap”				453	1975	3345	
IV.	Blanks							
	flakes	538	319	33	5	5	6	50
	broken flakes	736	233	37	—	—	—	61
	burnt flakes	323	—	—	—	—	—	—
	blades	20	9	10	8	—	25	—
	broken blades	20	12	—	—	—	—	—
	burnt blades	8	—	—	—	—	—	—
V.	Modified pieces							
	edge retouched	43	26	15	12	9	11	9
	burins	24	15	5	2	—	—	1
	Endscrapers	11	8	6	6	1	7	1
	notched pieces	18	9	4	4	3	3	—
	denticulates	1	1	3	—	1	1	3
	percoir/drill	2	—	—	—	—	1	—
	carinated scrapers/ bladelet cores	—	—	—	1	1	20	—
	use retouched	20	18	5	1	2	9	2
TOTALS		2137	850	142	497	3010	3444	157

Microblade Component

	<i>AK II</i>	<i>AK IIIA</i>	<i>AK IIIB</i>	<i>KK I</i>	<i>KK II</i>	<i>KK III</i>	<i>KJ</i>
MB cores	18	7	1	2	—	—	1
MB	489	88	—	?	—	—	43
Ret. MB	31	11	—	—	—	—	—
TOTALS	538	106	1	2	0	0	44





**Fig. 2.5:** Kara Kamar, Level II, Late Palaeolithic (Scale 1/1). 1 and 2. Flake cores. 3. Core rejuvenation flake. 4. Edge retouched primary flake. 5. Edge retouched broken blade. 6. Transverse scraper.

much fuller investigation and description before they can be established as true Middle Palaeolithic occurrences (Dasht-i-Nawar, Aq Kupruk, and Hazar Sum).

On the basis of external evidence it is not at all unlikely that Afghanistan would have been occupied by Middle Palaeolithic peoples. The Zagros mountains in Iraq and Iran have revealed numerous Middle Palaeolithic sites (the earliest known occupations in that area). In Soviet Central Asia the presence of typologically Middle Palaeolithic assemblages is well documented. Similarly in Pakistan there is no doubt of a Middle Palaeolithic presence. It is unlikely, therefore, that Afghanistan would be unoccupied during this period if all the surrounding territories were populated.

In a broad evolutionary perspective it appears that vast areas of Southwest and Soviet Central Asia were uninhabited until perhaps late in the Middle Pleistocene when Lower Palaeolithic populations began to move into increasingly interior areas of the continent.

Exactly what combination of behaviour patterns and technology made this expansion possible is as yet unknown, and it remains an exciting area for future research. Unfortunately, the knowledge of late Mid-Pleistocene environments in Afghanistan and surrounding regions is extremely limited, and hence the adaptive context of the Lower Palaeolithic expansion cannot be specified. It is known that the Middle Palaeolithic inhabitants of the Iranian Plateau, the Turan Lowlands, and Afghanistan were successful hunters. They appeared to have concentrated on essentially modern ungulates such as the onager (*Equus hemionus*), aurochs (*Bos primigenius*), sheep (*Ovis orientalis*), goat (*Capra hircus*), red deer (*Cervus elaphus*), and gazelle (*Gazella subgutturosa*). The population density of the Middle Palaeolithic seems to have been much lower than in the Levant or in Western Europe. Perhaps the combination of aridity and the consequent low biomass did not provide the conditions for a denser settlement. It is possible that the local Middle Palaeolithic population sizes were subject to marked oscillations.

On a world wide basis during the Middle Palaeolithic adaptations to several hitherto uninhabited environments evolved. These included the mid-latitude tundras, equatorial rainforests, and also many mid-latitude arid forest-steppes and highlands. It is in the latter environmental zone that continued study in Afghan prehistory may be predicted to make a valuable contribution.

## The Late Palaeolithic

### Sites

Kara Kamar I, III  
Dara-i-Kalon  
Aq Kupruk II, IIIA and IIIB  
Kok Jar  
Tashkurghan 40

### Carbon-14 Determinations

Kara Kamar, Level I

P-53  $10,580 \pm 720$  b.p. (Coon and Ralph, 1955)

Kara Kamar, Level III

P-42 Older than 25,000 b.p.

W-224  $34,000 \pm 3000$  b.p.

P-50 Older than 25,000 b.p.

W-226 Older than 32,000 b.p.

W-225 Older than 32,000 b.p.

P-51 Older than 25,000 b.p.

P-49 Older than 25,000 b.p.

} (Coon and Ralph, 1955)

Dara-i-Kalon, Level III

R-274 9475  $\pm$  100 b.p. (Alessio, *et al.*, 1967)

Aq Kupruk II, Kuprukian Level

HV 1358 16,615  $\pm$  215 b.p. (Dupree, 1968)

The Late Palaeolithic is the best known interval of hunting and gathering activity in Afghanistan. All of the known sites are found north of the Hindu Kush in the semi-arid steppe zone where the present mean annual precipitation is less than 250 mm and there is an open steppe vegetation. All of the known sites, with the exception of the Tashkurghan 40 discovered by Gouin, are within the northern foothills of the Hindu Kush at elevation ranging from 700 to approximately 1100 m above sea level. (Tashkurghan 40 is located in the Turkestan plain at an elevation of approximately 370 m.) The present-day vegetation, beside the irrigated village gardens and shimmering poplar stands, is characterized by low shrubs and small and open stands of Pistachio trees (*Pistacia vera*). Relief is considerable in the foothill zone. For example, within a 10 km horizontal distance of Aq Kupruk, the elevation ranges from 700 to 2000 m. The landscape generally consists of faulted and folded ranges which are separated by river valleys. These valleys vary in form from narrow and deeply incised channels to open, terraced systems with flood plains. Topographically, this is ideal terrain for sheep and especially goat.

The late Würm and early Holocene environments are not well known because there has been little Pleistocene geological or palynological investigation in this area. In general, however, it is not unreasonable to conclude that the late Pleistocene environment was considerably colder and at least as arid as today's climate. In the Zagros mountains at similar elevations but more southern by altitudes to the northern foothill region of Afghanistan, H. E. Wright has interpreted the pollen and palaeolimnological data as indicative of a cool (but not cold) steppe condition (Wright, 1968: 338). In Afghanistan the environment probably would have been even cooler and more arid; a combination producing a rather sparse steppe.

The source of precipitation in northern Afghanistan today is the same as it was during most of the Pleistocene. Storm tracks leading eastward from the Mediterranean bring the winter and spring rains. According to H. Bobek, the Siberian high pressure system (a semi-permanent winter anti-cyclone) was intensified during the Late Pleistocene and thus served to reduce the penetration of the Mediterranean low pressure storms into the Iranian Plateau and on into Afghanistan (cited in Wright, 1961: 157). General humidity (precipitation minus evaporation) may have been somewhat higher during cold phases of the Late Pleistocene, because lower temperatures would have had the effect of reducing evaporation and thereby increasing general humidity. This had the effect of raising lake levels in some cases. The degree of cooling during Würm stadials in northern Afghanistan is not accurately known. An overall planetary reduction in the mean annual temperature of 5° to 7° C. has been calculated by von Wissman (1956: 281). Evidence for a 700–1000 m depression of the snowline on the northern slope of the Hindu Kush is cited by Charlesworth (1957: 652). This lowered snowline clearly represents cooler temperatures, but it may also reflect some slight increase in precipitation. Palaeolithic studies will make few major advances until the Pleistocene environments in Afghanistan are better known.

## Kara Kamar III

Layer III at Kara Kamar (Figs 2.6–2.8) is perhaps one of the most important Palaeolithic discoveries in Afghanistan. Typologically, the lithic industry from this layer is Upper Palaeolithic, and the chronological indications are that it is a very early Upper Palaeolithic.

Level III is composed of loess mixed in with occupational debris. Its lower boundary is marked by a contact with a ‘brown cave earth’ according to Coon, but its upper boundary has no definite stratigraphic indication. Instead, the boundary between Levels II and III was determined by Coon on the basis of lithic typology and lithology. Loess deposition in northern Afghanistan is not directly related to specific climatological causes. It is definitely not the result of the deflation of glacial outwash plains as is the case in parts of Europe. Rather, the Afghan loess has its origin in the fine alluvium of the Amu-darya, and it is transported by the prevailing north wind. Loess deposition in northern Afghanistan appears to be a more or less continuous phenomenon and is found in both glacial and interglacial periods.

The Kara Kamar III Carbon-14 determinations were made on charcoal fragments, and they consistently indicated a age greater than 25,000 and perhaps greater than 32,000 years. How much older is not known, because the determinations were made in the middle 1950s with equipment the maximum range of which had been exceeded. In any case, the Kara Kamar III industry is at least broadly contemporary with the earliest phases of the Baradostian Upper Palaeolithic of the Zagros.

The lithic industry of Kara Kamar III was manufactured from a homogeneous, locally abundant, nodular flint. The complete lithic industry excavated in 1954 is no longer available for study because a large number of unretouched flakes, blades and various forms of chipping waste were discarded at the time of excavation, and some of the retouched flakes and blades were subsequently lost. Nevertheless, the extant collection at the Kabul Museum and the drawings and photographs made at the time of the excavation, give a useful picture of the general level of technology and the type of major tool classes used.

The retouched artifacts were made primarily on blades. This is evident from an analysis of the length and width dimensions of the retouched artifacts and the unretouched blanks. The mean length/width ratio for all retouched artifacts was 2.3 and in addition there were several unretouched blades in the Kabul Museum collection.

The lithic industry was classified into several components and major tool classes. The result of the classification is shown in Table I.

No blade cores were found in the collection, but bladelet cores of the type illustrated in Fig. 2.6 were present. There were a number of bladelets produced from these cores as well as a number of small curved bladelets which were the products of the carinated scaper manufacture. Figure 2.6, Nos. 1 and 3 show bladelets which actually fit on the core, shown alongside. Curiously, none of these bladelets of either variety which I examined were retouched or appeared to have any noticeable use wear.

The retouched artifacts have been cited in the literature as containing ‘Aurignacian’ or Aurignacoid elements (e.g. Bordes, 1968: 198; Clark, 1969: 52–53; Coon, 1957: 248; Garrod, 1966: 41; Oakley, 1966: 161). The basis for this attribution is the morphology of the carinated endscrapers. Indeed, there is a resemblance between the carinated endscrapers



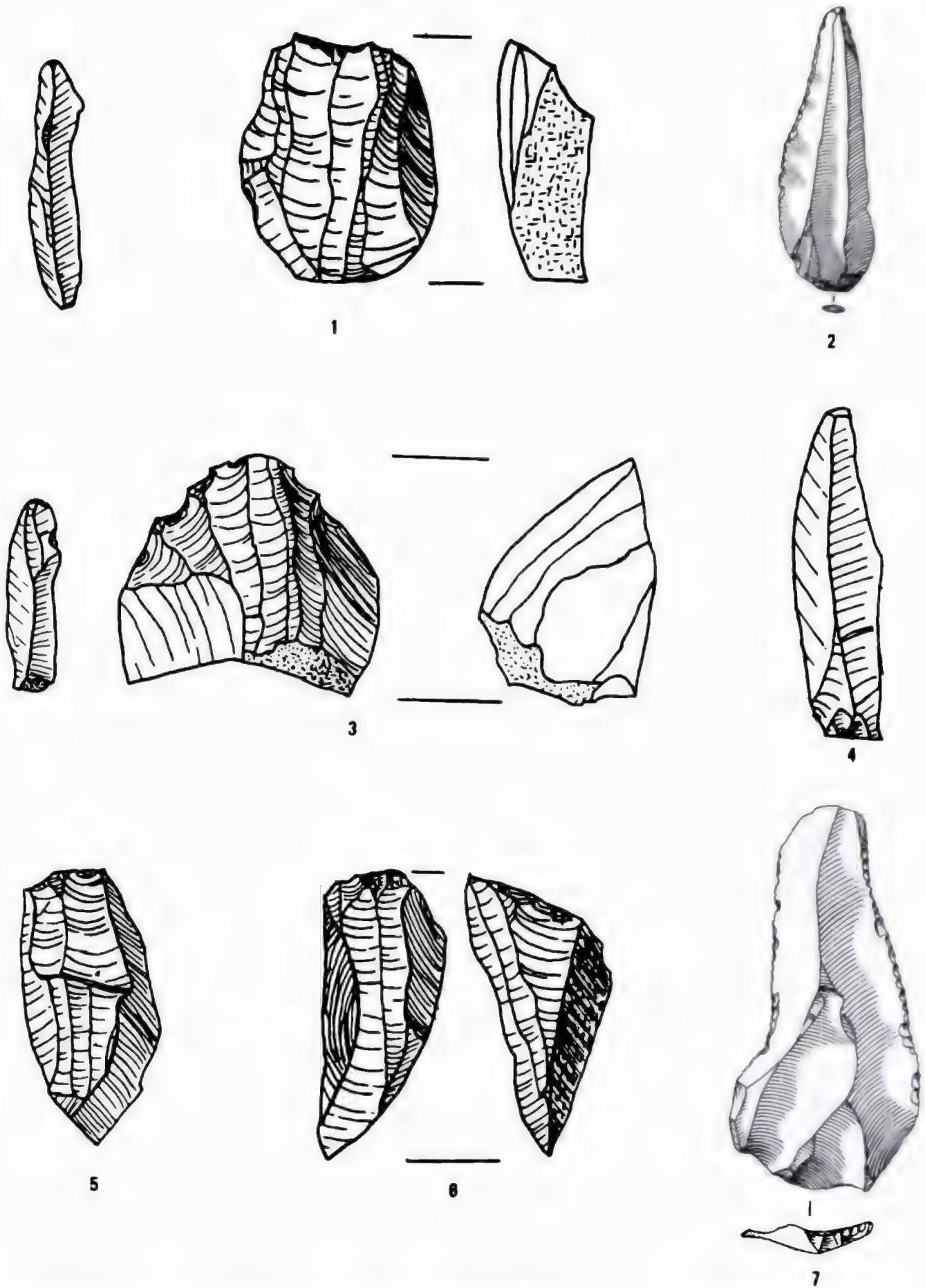
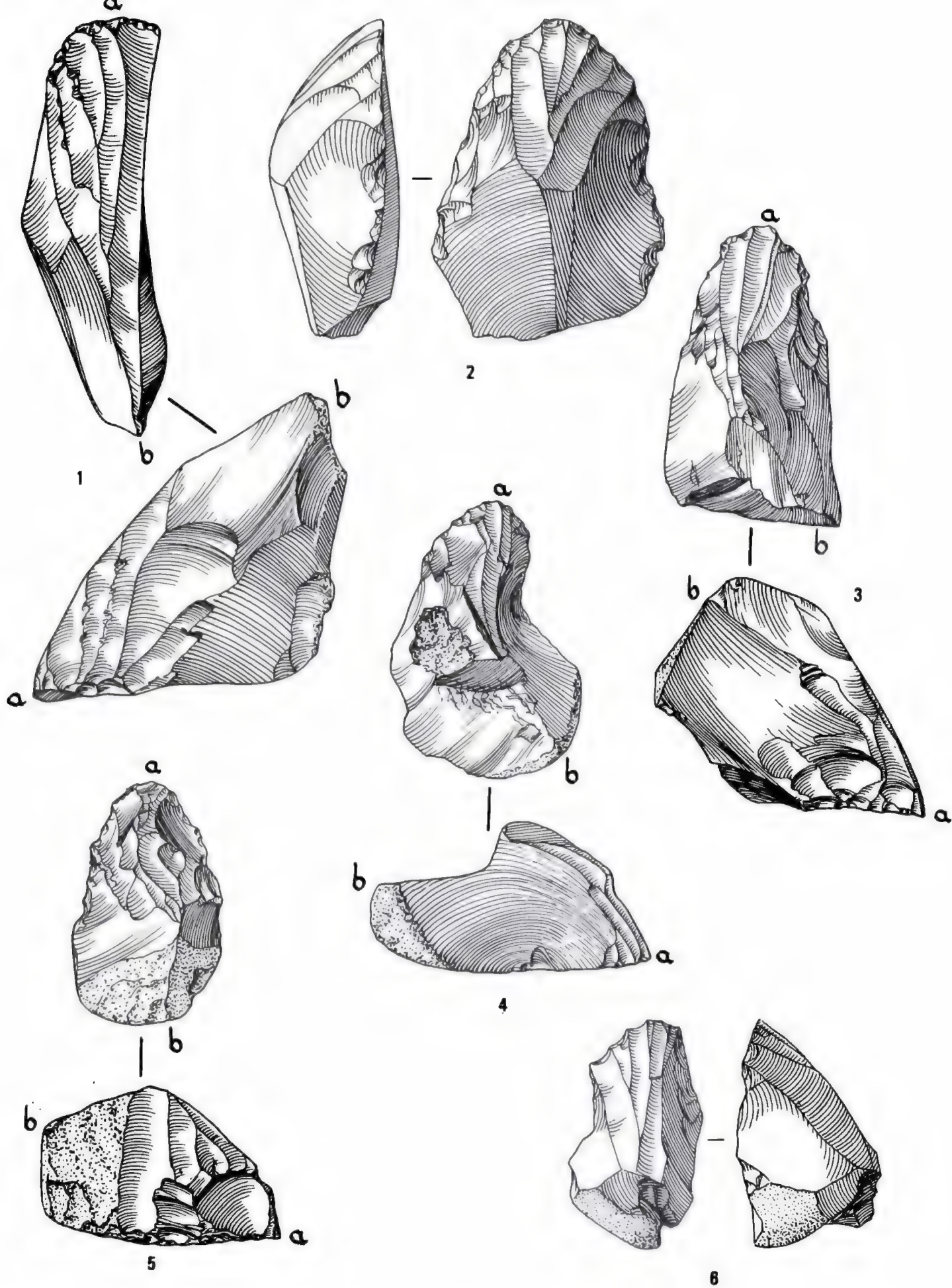


Fig. 2.6: Kara Kamar, Level III, Upper Palaeolithic (Scale 1/1). 1. Bladelet core and bladelet. 2. Retouched blade. 3. Bladelet core and bladelet. 4. Unretouched blade. 5 and 6. Bladelet core. 7. Retouched blade.



**Fig. 2.7:** Kara Kamar, Level III, Upper Palaeolithic (Scale 1/1). 1–6 Carinated endscrapers/bladelet cores.

from Kara Kamar and from the Levantine Aurignacian. For example from Mugharet el-Wad at Mt Carmel, Garrod illustrates several specimens which appear to resemble closely those from Kara Kamar III (cf. Plate XVII. XIX, XXII, XXV, Layers D and E, Mugharet el-Wad, Garrod and Bate, 1937). Similar carinated endscrapers, however, can be found in non-Aurignacian contexts. They appear in the Kebaran, an Epi-Palaeolithic manifestation in the Levant which is at least 10,000 years younger than the Aurignacian. In other words, carinated endscrapers are a poor type-fossil because they have a wide distribution in time and in space. Several of the carinated endscrapers from Kara Kamar III are illustrated in Fig. 2.7. It is the case that the bladelet cores mentioned above and the carinated endscrapers form an intergrading series. This fact makes the use of the carinated endscrapers from Kara Kamar as diagnostics for "Aurignacian" culture even more problematical because they are subject to a great degree of variation.

There are no burins of any kind in the Kara Kamar III lithic industry. This is not an expected characteristic of an early Upper Palaeolithic industry, particularly an "Aurignacian-like" one. In fact Kara Kamar III is quite simple typologically. It consists of the carinated endscrapers, marginally retouched and use retouched blades and a few notched pieces (Fig. 2.8 illustrates three additional endscrapers). No doubt the full typological repertoire of the Kara Kamar III people is not represented at this site; it is probable that the tools in Kara Kamar III are related to a few specific functions. Table I lists the frequencies of the major tool classes at Kara Kamar.

Kara Kamar III remains a unique find. Since its discovery in 1954, nothing similar in date or typology has been found in Afghanistan. Kara Kamar III is an early Upper Palaeolithic industry based on blade technology, and it has no parallels in Soviet Central Asia, India or Pakistan. In fact Late Pleistocene, Upper Palaeolithic blade technologies are virtually unknown in any of the just mentioned areas. In all of Soviet Central Asia only two stratified Upper Palaeolithic sites are known: Samarkand and Shugnou. The Samarkand site is located in the Komosomol Park in the city of Samarkand, and it is an open air site (Lev, 1965a,b). Shugnou was found by V. A. Ranov on a terrace of the Yak-Su River in Uzbekhistan at an elevation of 2000 m (Nikonov and Ranov, 1971). Both of the excavators have described the lithic industries as having a strong Mousterian element and as unrelated to the Upper Palaeolithic of northern Afghanistan and other regions in Southwest Asia.

Only to the west, in the Zagros mountains of Iraq and Iran has a roughly contemporary Palaeolithic industry, the Baradostian, been discovered. Typologically, there is no reason to conclude that Kara Kamar III is related in any direct way with the Baradostian although their environments and economies were somewhat similar. There is no smooth typological transition between the Middle and Upper Palaeolithic in either area, and hence it is not possible to conclude on typological grounds that an Upper Palaeolithic industry originated in either area. The meaning of typological similarities and differences, however, is often unclear and at this point it would be foolish to rule out an indigenous development of an Upper Palaeolithic blade industry in the Zagros or the Hindu Kush.

Following the Kara Kamar III occupation there is a large temporal gap before the next sites are encountered in the archaeological record. A look at the C-14 determinations listed above shows an hiatus of approximately 15,000 radiocarbon years. It might be suggested that



this gap is an artifact of the relatively little amount of Palaeolithic survey which has been conducted in this area. A gap of similar magnitude, however, apparently exists in the Zagros mountains, and lack of Upper Palaeolithic sites in Soviet Central Asia has already been mentioned. Ralph Solecki has attributed this scarcity of human population to the

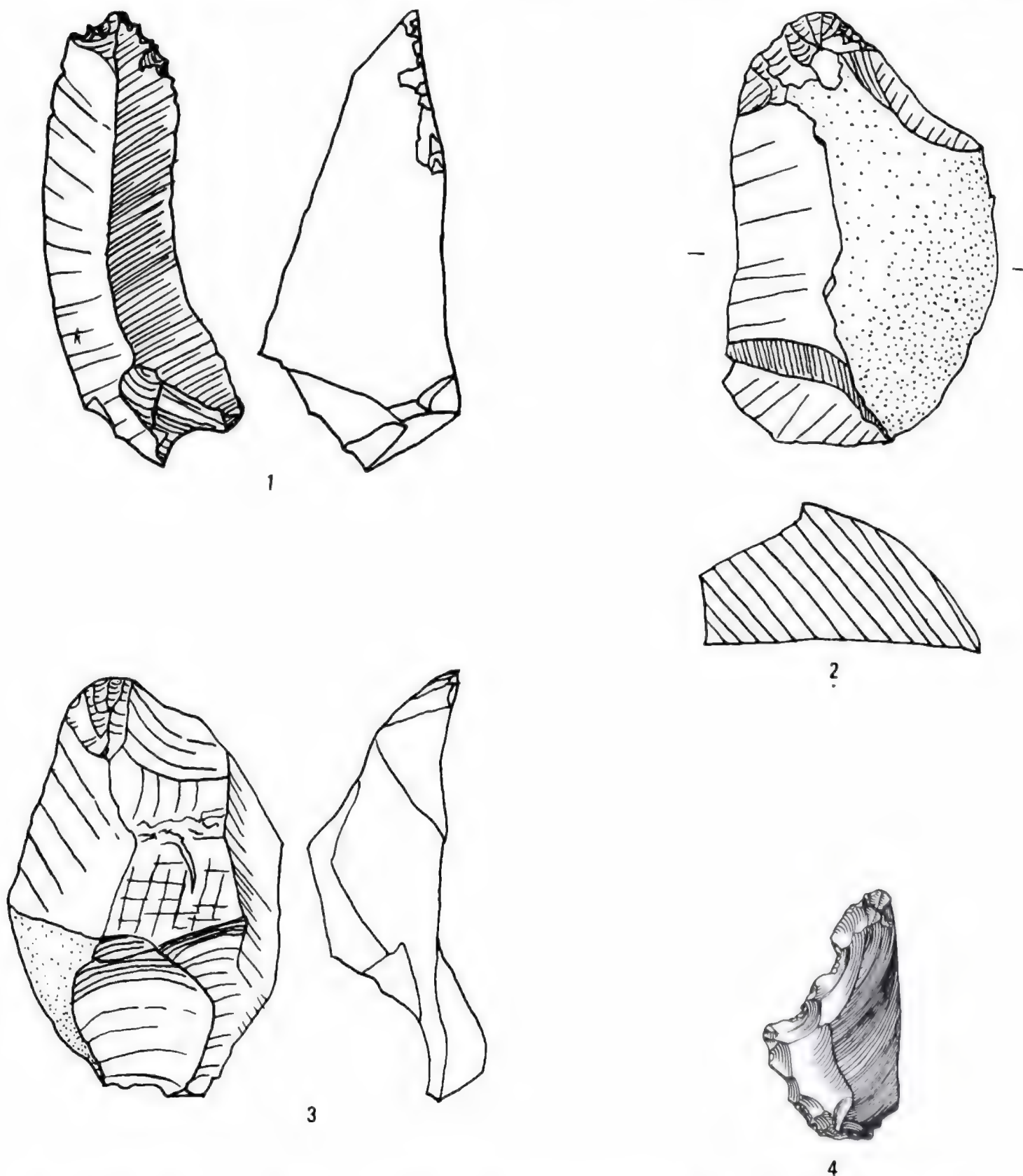


Fig. 2.8: Kara Kamar, Level III, Upper Palaeolithic (Scale 1/1). 1-3. Endsrapers. 4. Notched flake.

deterioration of climate during the main Würm (Solecki, 1963). Although Frank Hole and Kent Flannery have indicated that there is evidence that the Zarzian developed 'directly out of the Baradostian' at the site of Pa Sangar in the Khorramabad valley, Iran, the continuity of occupation is not well documented (Hole and Flannery, 1967: 153).

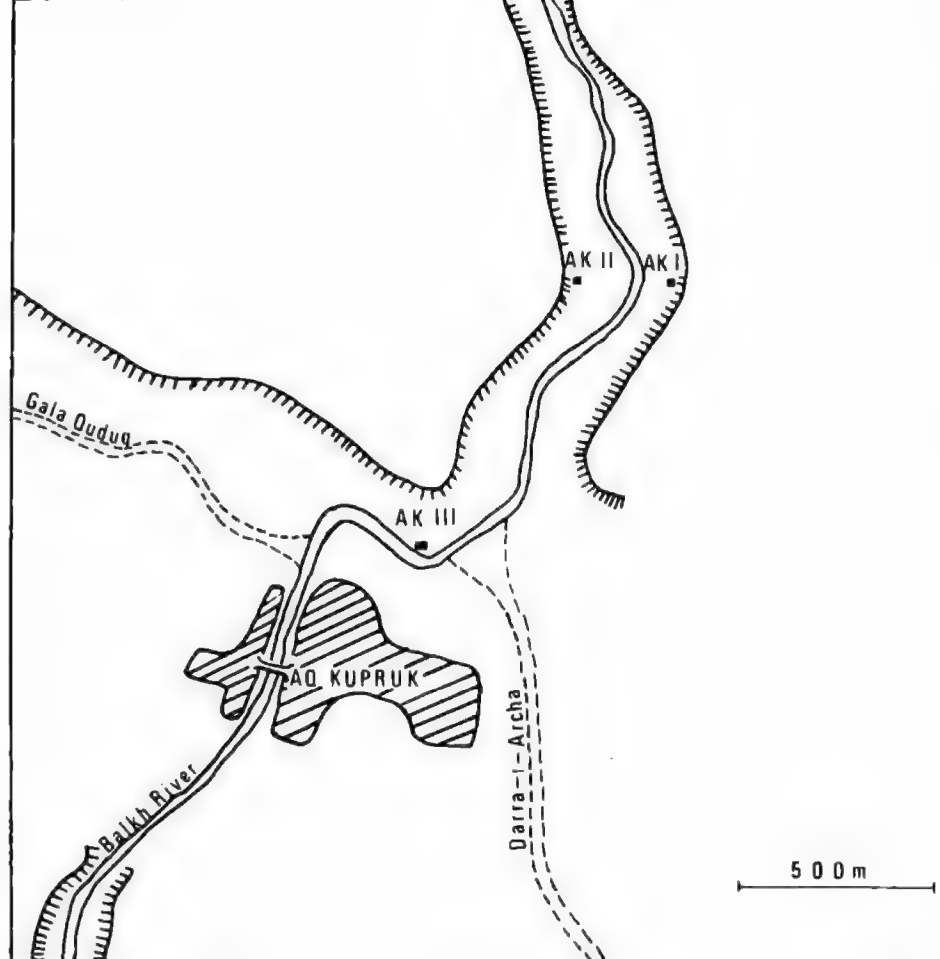
It is clear that the mere depression of temperature would not have dislodged hunting and gathering bands from the foothills of the Zagros and Hindu Kush. It is well known that by Middle Palaeolithic times, Mid-latitude tundras were inhabited and by Upper Palaeolithic times severe sub-arctic environments were exploited. The technology for cold temperature adaptation (fire, shelter, clothing and specialized hunting gear) was no doubt available to the Upper Palaeolithic denizens of highland Southwest Asia and Afghanistan. The highland habitat under the cold and dry steppe conditions of the main Würm stadial, however, perhaps did not support sufficient numbers of the gregarious ungulates, and more critical to human populations, digestable vegetation was not at all abundant on the cold steppe. It seems highly probable, therefore, that human populations had to descend to lower elevations and maybe settled near the Amu-darya. The traces of their camps have not been discovered. This could be a result of the limited amount of archaeological reconnaissance in this area, and also to the various geomorphological processes which can bury or disturb surface occupation debris. It is also quite possible that the entire region was uninhabited during the maximum of the Würm. A great deal of research will be required to solve this problem.

## The Epi-Palaeolithic

Approximately 15,000 years after the Kara Kamar III occurrence, the most abundant and well known finds from the Afghan Palaeolithic are known. Collectively, these sites may be classified as Epi-Palaeolithic; a designation which refers to the appearance of microlithic elements in the late Würm and early Holocene. Indeed, in Afghanistan there appears an exceptionally fine microblade technique at this time which does not have any known precursors elsewhere.

Near the town of Aq Kupruk, Balkh Province, several Palaeolithic localities were discovered and excavated by Dupree (Figs 2.9–2.17). Figure 2.9 shows the location of the town in a widened portion of the Balkh river valley, and Fig. 2.10 the valley from the west. Both north and south of Aq Kupruk the Balkh river is contained in a narrow gorge whose vertical limestone walls often exceed 100 metres in height. The Palaeolithic sites are found north of the town near the point where the Balkh river re-enters the steep-sided gorge. Aq Kupruk III is an open-air site found in two river gravels of the lowest terrace of the Balkh. Aq Kupruk II (Fig. 2.11) is a large shelter located a half a kilometre downstream from Aq Kupruk III and is within the gorge (see Fig. 2.11). The shelter measures approximately 60 m wide at the drip line and about 14 m deep. The back of the shelter is 68 m from the river, and at the surface the back wall is 12 m above the stream level.

The stratigraphy of Aq Kupruk II was rather complicated, but may be summarized as follows. The deposit is composed of three elements: roof fall (limestone), loess and alluvium. The alluvium interfingers with the loess and roof fall on the slope outside of the shelter, but it



**Fig. 2.9:** Plan of Aq Kupruk showing the location of the archaeological sites.



**Fig. 2.10:** View of Aq Kupruk from the West. The wadi, Gala Qudug, is in the foreground.





**Fig. 2.11:** The Shelter of Aq Kupruk II. The Balkh River is in the foreground.

does not extend beyond the drip line toward the back of the shelter. Alluvial deposits were only found lower in the section than the Palaeolithic level. The Palaeolithic assemblage was found in a single thin layer (25–40 cm thick) which contained charcoal, bone and flint artifacts. It sloped sharply toward the river. Dupree's excavation trench sampled perhaps only 10% of the actual occupation surface of the cave and most of the flat occupation area under the drip line remains to be excavated. Further up the section are nonceramic and ceramic Neolithic layers and an historic Iron Age layer. No pollen analysis has been completed on the section and climatic interpretations of the stratigraphy are not well developed at the present time.

The Palaeolithic assemblage consisted almost entirely of flint artifacts made from a locally available nodular flint of high quality. Figure 2.12 shows two nodules in limestone bedrock which were found a short distance from the cave.

A Carbon-14 determination for the Palaeolithic layer of Aq Kupruk II was made on a solid piece of charcoal and the result was  $16,615 \pm 215$  B.P. This date is not unreasonable on typological grounds, but certainly more determinations must be run before the age of the



Fig. 2.12: Flint Nodules *in situ* near Aq Kupruk (Dar-i-Archa).

Palaeolithic layer can be more definitely known. A determination of (HV 1355)  $10,210 \pm 234$  B.P. has been made for the early Neolithic of Aq Kupruk II and this time range must be the lower limit for the Palaeolithic.

The primary flaking techniques of the Aq Kupruk II lithic industry consisted of flake/blade production from simple single and multiple platform cores, and the manufacture of very fine microblades by pressure technique from exceptionally small bullet shaped cores. Illustrations of the cores and their products are shown in Figs 2.12 and 2.13. No blade cores of the type which produced the kind of blades illustrated in Fig. 2.13, Nos 3 and 4 were found at this or any other Epi-Palaeolithic site in Afghanistan.

Figure 2.14 shows several microblade cores and microblades from Aq Kupruk II. The microcores show several common characteristics. The cores had distal preparation to make a pointed end. The striking platform (actually pressure platform) formed a  $90^\circ$  angle with the long axis of the core. This platform was invariably unfaceted and had a slightly concave contour. Several of the cores and microblades showed external signs of heat treating which was applied to facilitate the pressure removal of the microblades. Figure 2.14, Nos 8 and 9 represent the kind of very fine marginal retouch present on microblades. All in all, the microblade technology was very sophisticated, involving heat treating, pressure removals, some kind of a vise to hold the core steady and obviously considerable skill and experience of the artisan.



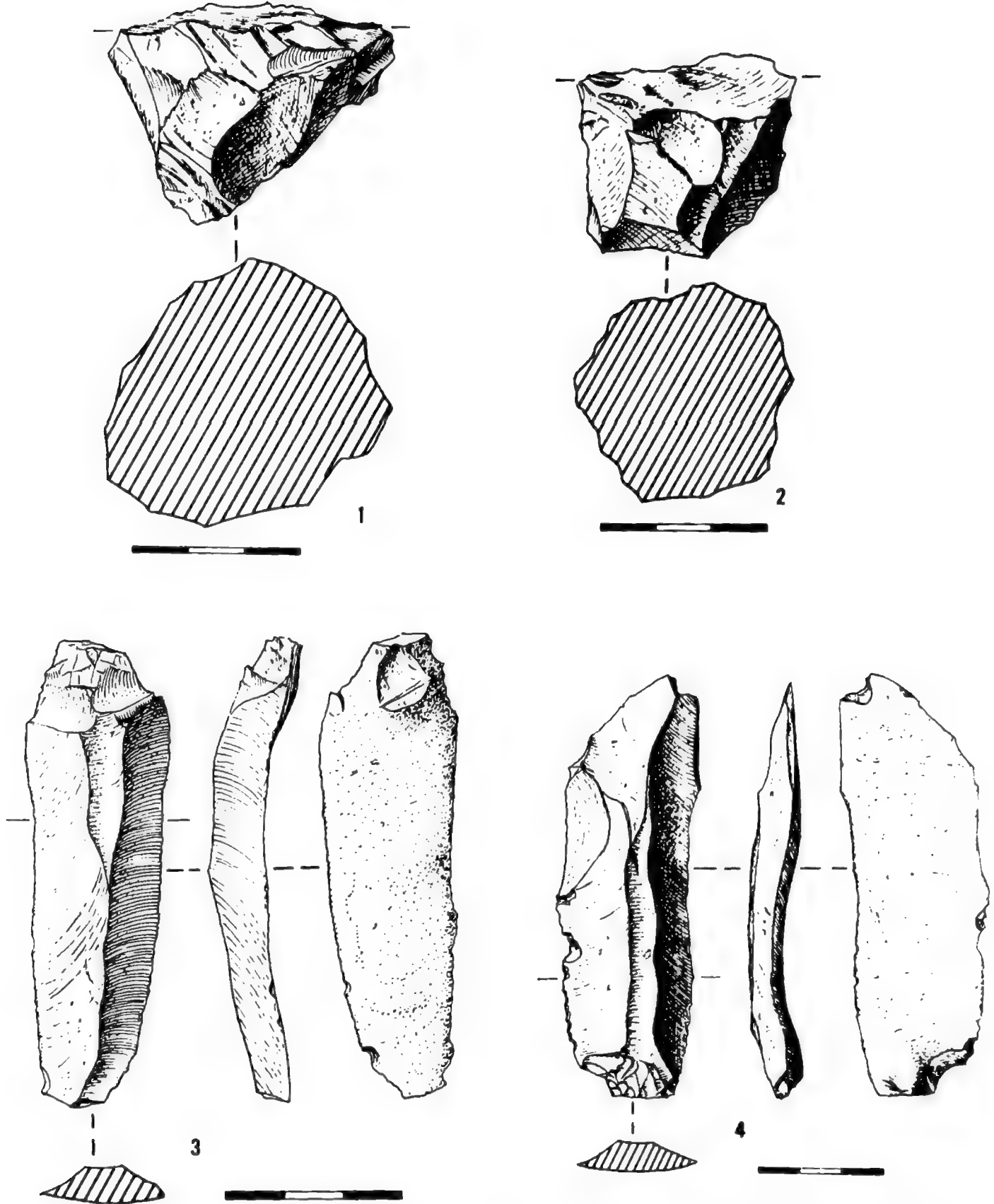
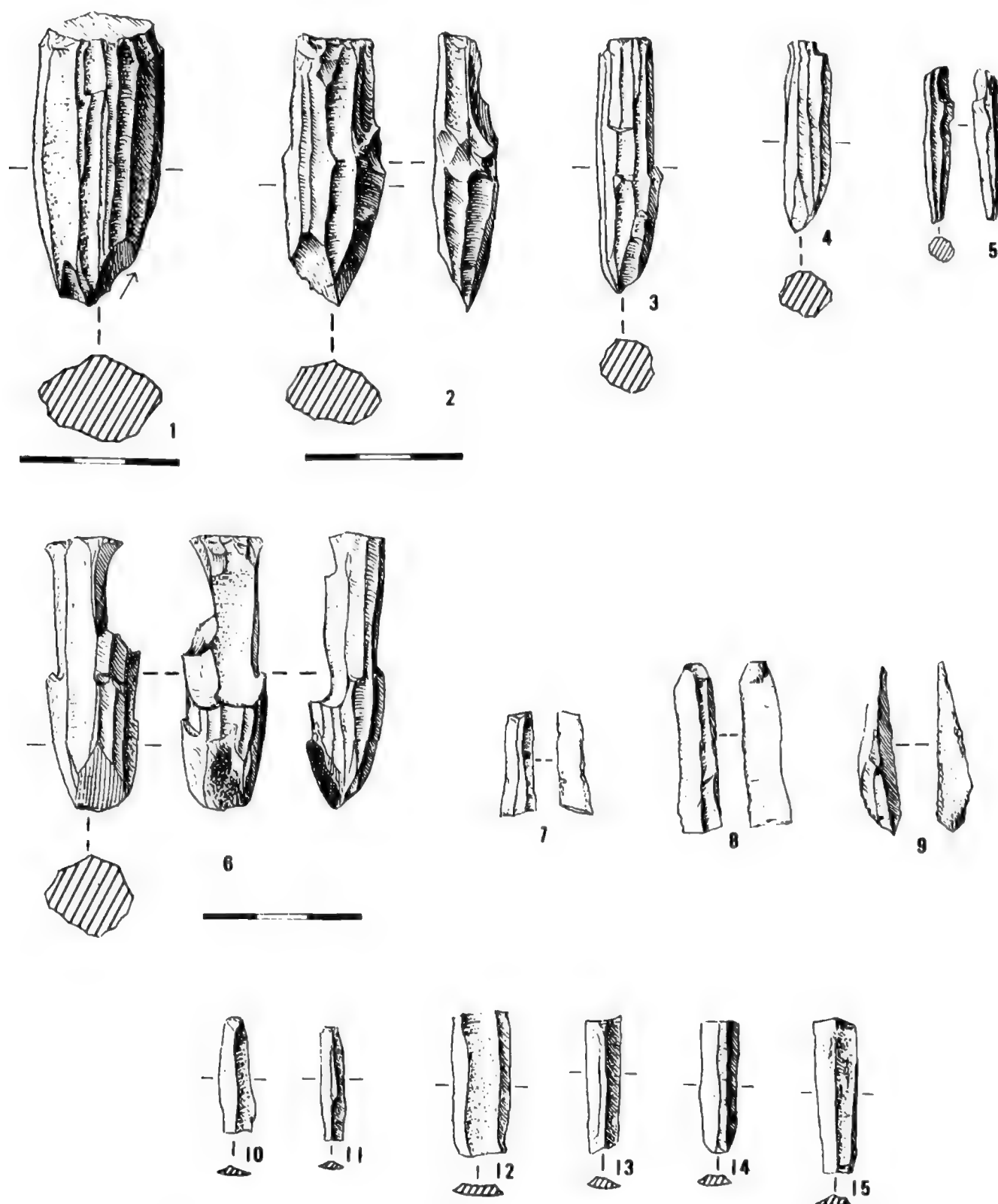


Fig. 2.13: Aq Kupruk, Epi-Palaeolithic. 1 and 2. Flake cores. 3 and 4. Use retouched blades.

Although the technique of the microblade technology is fairly well known, the function of these implements is not well demonstrated at all. The most likely interpretation is that they were part of a projectile system, perhaps serving as barbs on a shaft. Both the microcores and blades are found in shelters as well as in the two known open sites of the Afghan Epi-



**Fig. 2.14:** Aq Kupruk, microlithic component, Epi-Palaeolithic. 1-6. Microblade cores. 7-9. Marginally retouched microblades. 10-15. Unretouched microblades.

Palaeolithic. It may be inferred from this contextual information that microblades were not utilized only in base camps, and that they are related to some extractive activity. The discovery of a microblade core at the Kok Jar surface site is difficult to interpret, because it would seem very unlikely that microblades were being manufactured at small temporary camps.

The microblade cores and microblades of the Epi-Palaeolithic are significant in many respects. First, they are found in all of the Epi-Palaeolithic assemblages of northern Afghanistan. Similar microblade cores are found in southwestern Iran from the early Neolithic (Hole *et al.*, 1969), and near Kerman (Huckriede, 1961), but nowhere are they found in Late Palaeolithic Zarzian contexts (Hole and Flannery, 1967) or in the Late Palaeolithic Caspian sites (Dupree, 1952; Coon, 1952; McBurney, 1964 and 1968). In Soviet Central Asia similar microlithic techniques are known but only in a very late 'Mesolithic' context such as in the eastern fringes of the Urals from the seventh to fourth millennia B.C. (Bader, 1970, p. 96) and in early Neolithic sites from Kazakhstan (Vinogradov, 1970). A second feature of the microlithic industry at Aq Kupruk II as well as all the other Afghan Epi-Palaeolithic sites is that there are no geometric microliths of any kind, backed microblades nor even obliquely truncated microblades. Of the 520 microblades in the Aq Kupruk II sample, only 31 (5.7%) were modified by secondary or use retouch. The secondary retouch consisted in all but one case of an extremely fine marginal retouch. The lack of geometrics and truncated elements is unusual in any microblade industry, and it perhaps represents an early phase in microblade technological evolution. In the Levant, for example, Ofer Bar-Yosef has characterized the evolution of the microblade technology in the Kebaran as:

... a continuous development from simple microliths to industries including oblique-truncated bladelets and narrow micropoints. This is followed by the emergence of geometric manufacture which gradually increases in proficiency to the developed forms of trapeze-rectangles, reaching its final achievement in the production of lunates (Bar-Yosef, 1970, p. 54-55).

This sequence in the Levant originates in the Palestinian Late Aurignacian and continues through the Geometric Kebaran, a span of approximately 10,000 years.

It is tempting to suggest a similar sequence in Afghanistan beginning with the small bladelets struck from the carinated endscraper/bladelet cores of Kara Kamar III and ending with the Afghan Epi-Palaeolithic microblades and cores of Tashkurgan 40. The problem is, of course, that the chronological hiatus discussed earlier between them is quite large, and it is consequently difficult to demonstrate any direct technological continuity between them.

Small microblade cores and microblades are found in McBurney's site at Ali Tappeh on the southern shore of the Caspian sea (McBurney, 1968). The microblade cores at Ali Tappeh, however, are quite distinct from the ones of northern Afghanistan. At Ali Tappeh the microblade cores were made on the margins of thick flakes and generally did not have microblade removals around the entire perimeter.

Another major component of the Aq Kupruk II tool kit was the steep-ended scraper (Fig. 2.15). Unlike the Kara Kamar III carinated end scrapers/bladelet cores, the examples from Aq Kupruk II have short bladelet removal scars and a steeper mean edge angle. There is some good evidence that the preform for the steep endscraper was highly similar to the preform

for the microblade cores. In addition to the steep-ended scrapers, several standard endscrapers were present, and four examples are illustrated in Fig. 2.16.

Dihedral burins, burins on retouched truncations and burins on snapped truncations formed the second largest group of retouched stone artifacts. Three dihedral burins and one

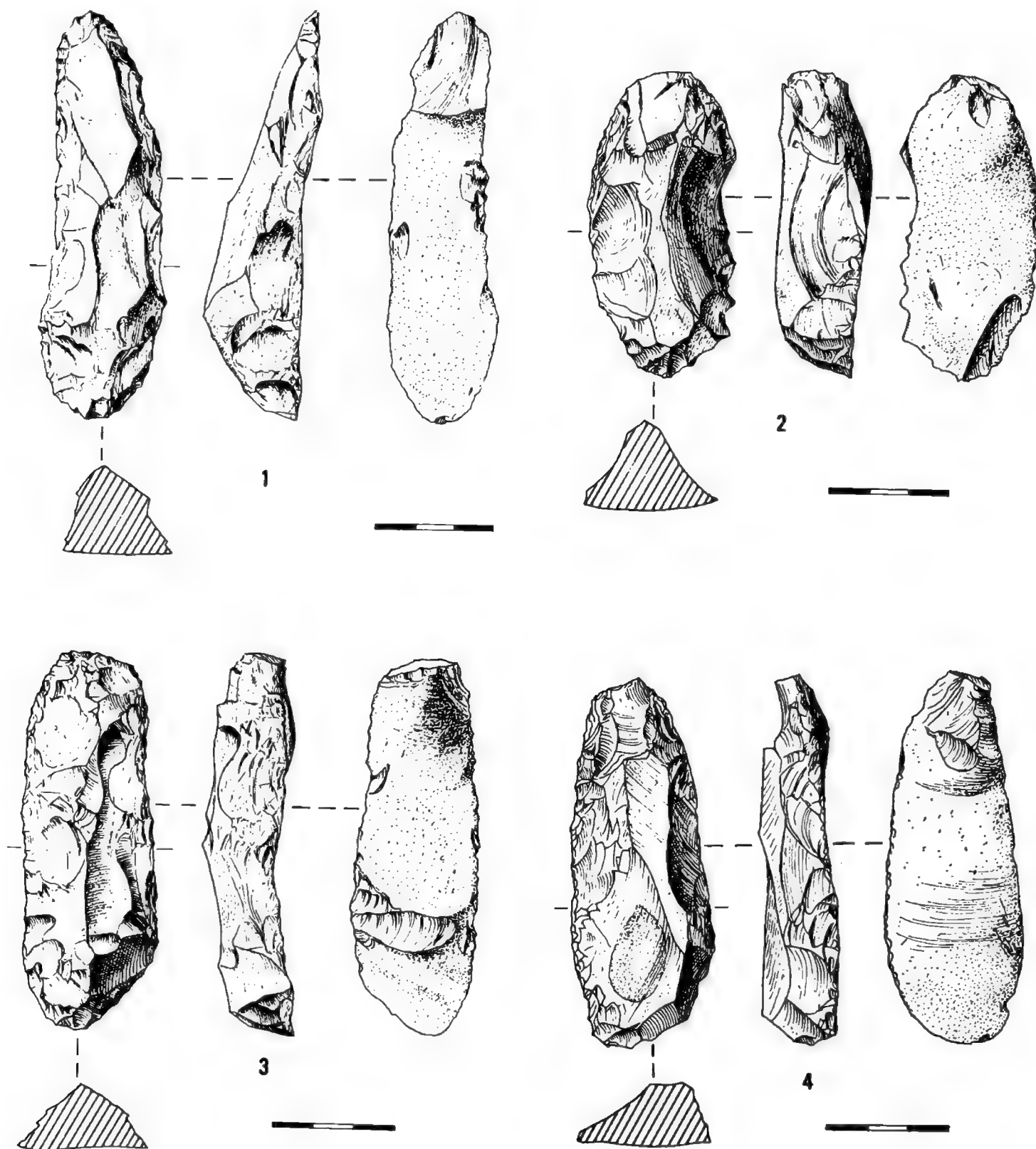


Fig. 2.15: Aq Kupruk, Epi-Palaeolithic. 1, 3. Steep endscrapers. 2, 4. Microblade core preparation forms/steep endscrapers.



burin on a snapped truncation are shown in Fig. 2.17. Edge retouched blanks were the most frequent major tool class. This category consisted of laterally and distally trimmed flakes and blades exclusive of endscrapers.

One of the most significant aspects of the discovery at Aq Kupruk II was the analysis of the faunal remains associated with the Palaeolithic deposit. Dexter Perkins (1972) identified the bone as to species with the following results.

**Table II**

<i>Species</i>	<i>Frequency</i>	<i>Percent</i>
<i>Ovis orientalis cycloceros</i>	8	9
<i>Capra hircus aegagrus</i>	9	10
<i>Ovis/Capra</i>	63	70
<i>Cervus elaphus</i> sp.	1	1
<i>Bos/Cervus</i>	5	6
<i>Equus</i>	1	1
<i>Canis aureus</i> sp.	2	2
<i>Vulpes</i>	1	1
TOTALS	90	100

Clearly, the overwhelming species represented were sheep and goat (89% of the identifiable bones). It seems evident that these two species were the predominant meat resources for the Late Palaeolithic peoples in northern Afghanistan.

At Aq Kupruk III there are two distinct strata which have yielded Epi-Palaeolithic assemblages. The upper one (AKIII-A) is nearly identical typologically and dimensionally with the Aq Kupruk II industry and it is inferred that they are roughly contemporary. The lower stratum (AKIII-B) however, presents a different picture. There, the microblade technique is not represented nor are the steep-ended scrapers. The length and width dimensions of the retouched artifacts from AKIII-B are significantly larger than either AKIII-A or AK II. Aq Kupruk III-B is as yet undated by Carbon-14.

In the Haibak region the Epi-Palaeolithic is represented by the Kara Kamar I, Kok Jar, and Dara-i-Kalon sites (See Fig. 2.18). Technologically and chronologically all of these sites are very close to the assemblages from Aq Kupruk with some slight variations. None of them are so strikingly different in technology or typology that they should be included in a separate archaeological "culture". Haibak is approximately 100 km from Aq Kupruk, is located in the same foothill zone, and is not isolated by any geographic barriers from Aq Kupruk. The location of the sites gives some indication of the settlement pattern. The Kok Jar surface site (Fig. 2.19) consisted of a single concentration of artifacts which were being exposed from a thin layer of soil on a mesa top. The mesa was an erosional remnant preserved by a freshwater limestone caprock which was approximately 30 m above the valley floor. Figure 2.19 shows the mesa and the arrow indicates the location of the site. A large area of the valley floor can be

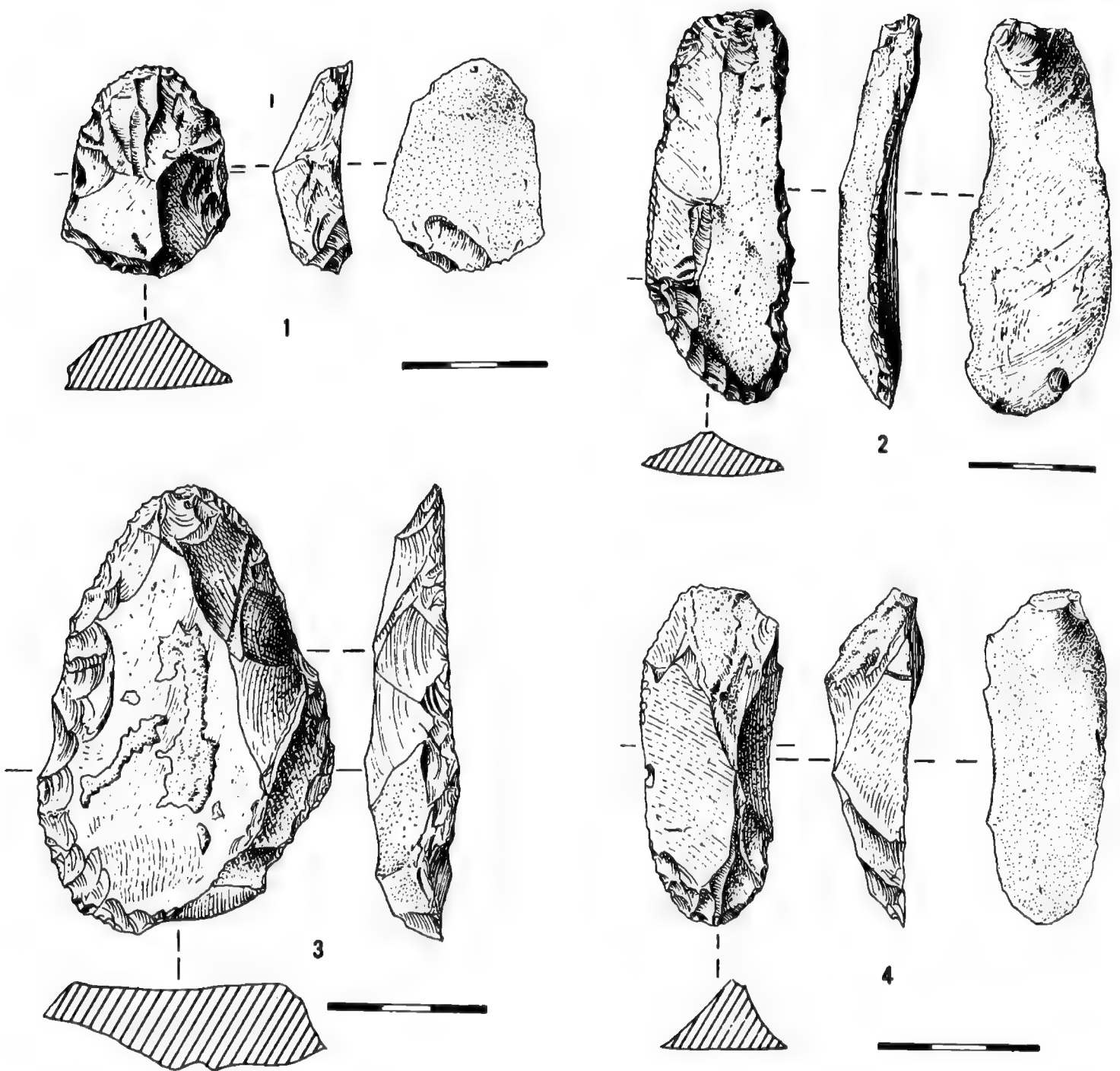


Fig. 2.16: Aq Kupruk, Epi-Palaeolithic. 1-4. Endscrapers.

surveyed from this vantage point. It would have made an ideal observation post for a hunting party.

The Dara-i-Kalon rockshelter, test excavated by Puglisi in 1965, is located in a dry wadi channel which has cut into the limestone bedrock to a depth of approximately 30 m. The shelter is narrow and long and probably was only used as a transitory station by small hunting groups. Puglisi has noted the presence of an earlier industry at the shelter which may correspond to the Aq Kupruk III-B manifestation.

Several artifacts from Kara Kamar, Level I are illustrated in Fig. 2.20. The microblade cores are similar to those from Kok Jar, Dara-i-Kalon and Aq Kupruk. Like Kok Jar, Kara

Kamar is a good observation post and may have been frequented by small hunting parties.

It seems clear that groups of hunters and gatherers exploited the broad interfluvies adjacent to the Samangan river during the period of climatic amelioration at the beginning of Holocene times. Coon's preliminary faunal analysis of the Kara Kamar I level indicated that

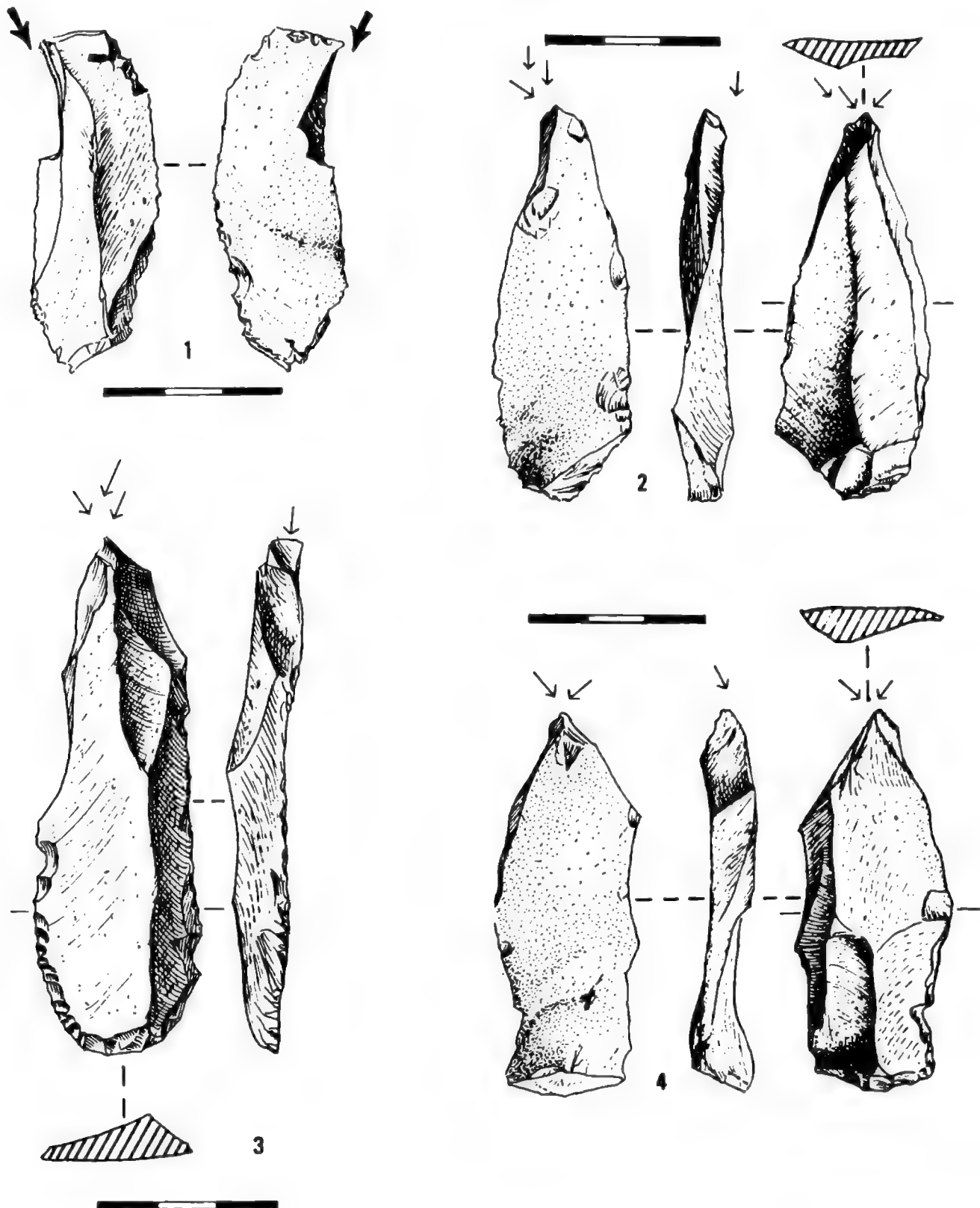
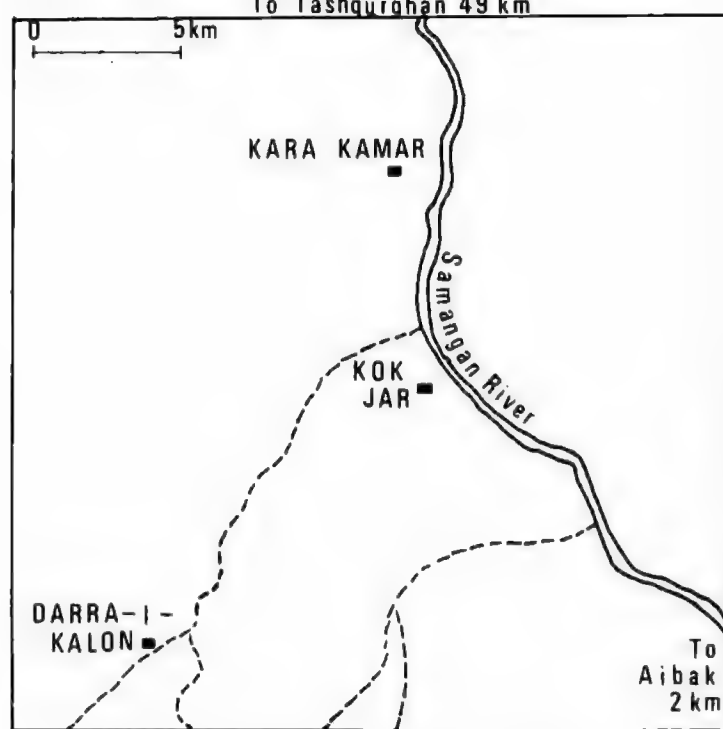


Fig. 2.17: Aq Kupruk, Epi-Palaeolithic. 1. Burin on a snapped truncation. 2, 4. Dihedral burins. 3. Endscraper-burin.



**Fig. 2.18:** Plan of Haibak vicinity showing the location of the Palaeolithic sites.



**Fig. 2.19:** Kok Jar Epi-Palaeolithic surface site.

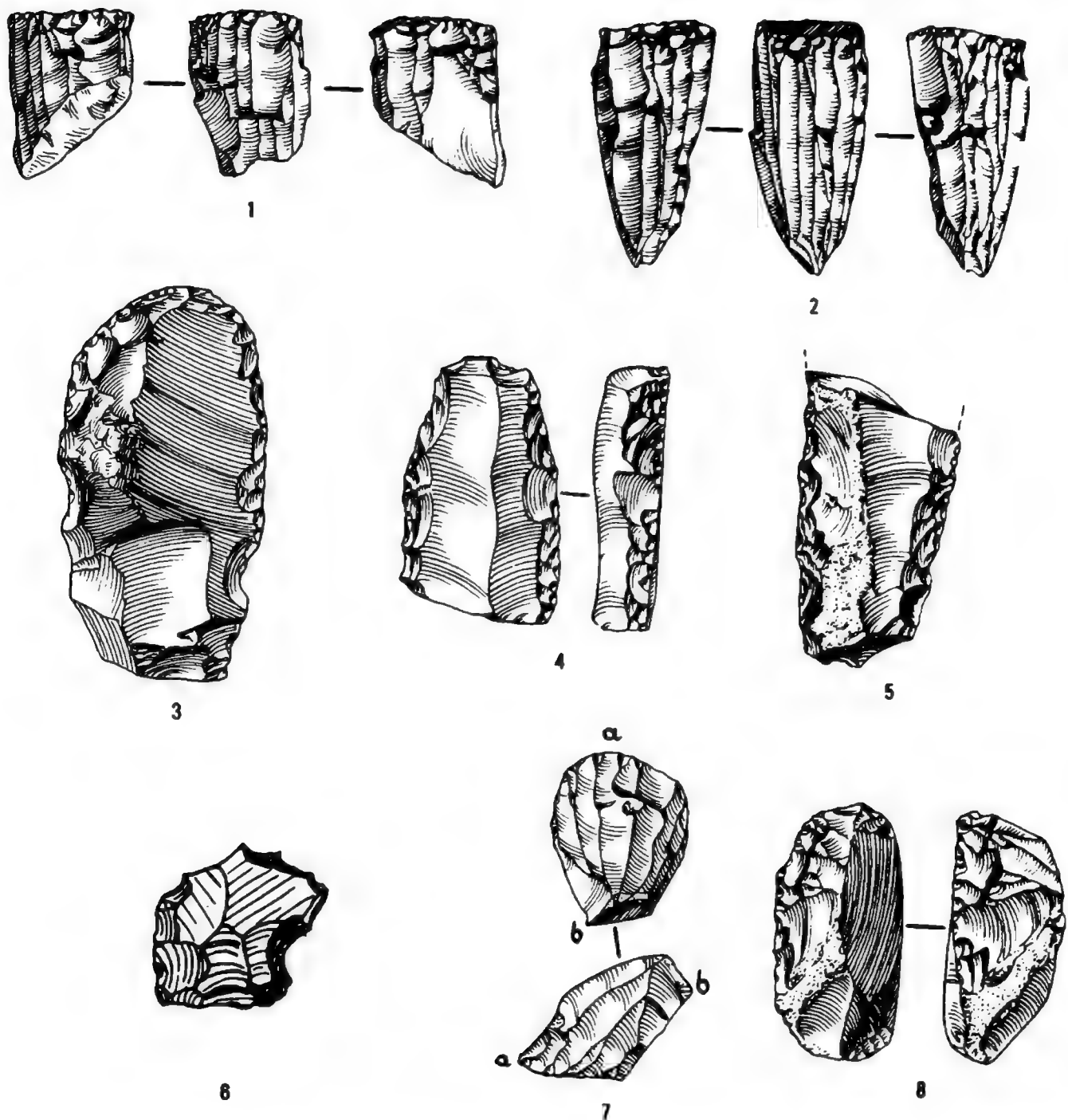


Fig. 2.20: Kara Kamar, Level I, Epi-Palaeolithic (Scale 1:1). 1-2. Microblade cores. 3. Endscraper. 4-5. Retouched broken blades. 6. Notched flake. 7. Carinated scraper bladelet core. 8. Side scraper.

gazelle was the primary species hunted along with wild sheep. The lack of hunted gazelle at Aq Kupruk may be explained by the qualitatively different terrain described earlier. It is simply unknown whether any riverine resources were utilized in the Haibak region, or whether the hunting and gathering groups seasonally moved further into the Hindu Kush during the summer and out to the Turkestan plains during the winter.

The most recent Epi-Palaeolithic site is known through the work of P. Gouin (1972) of the Délégation Archéologique Française en Afghanistan. His site is located on the flat deltaic plain just north of Tashkurghan and is designated Tashkurghan 40. It is a deflation site where the artifacts are being exposed on top of a stabilized dune. Flint artifacts were collected off the

surface over an area of more than several thousand square metres. No concentrations of artifacts were reported, and Gouin has interpreted the widely dispersed artifacts to have been locally transported by flooding of the Samangan River. The lithic industry from Tashkurghan 40 consists of over 3000 pieces of flint of which about four hundred were tools. They all showed weathering from both wind and water transport. This industry is quite distinct from the Epi-Palaeolithic of Aq Kupruk and Haibak and is probably from a later time period. This conclusion is based on the following points. First, the microblade component included backed elements, triangles, rectangles and lunates. Microburins were also present which is also indicative of microlith manufacture. Second, the microblades were produced by a different method than at Aq Kupruk or Haibak. At Tashkurghan, the microcores were made on a variety of forms, some of which were similar to the microcores at Ali Tappeh, Iran. None of the bullet shaped microblade cores, however, were found. Third, true burins are almost entirely lacking from this industry. Gouin has interpreted this site to be representative of a seasonal campsite, and he predicts other manifestations of this culture will be found in the northernmost foothills of the Hindu Kush.

## Summary

The above review of the Afghan Palaeolithic is more tantalizing than satisfying for a number of reasons which should be obvious to the reader. Clearly, Afghanistan is an important Palaeolithic area, and continued research there will be significant for prehistoric studies. To date, however, the work has only been preliminary and has indicated fewer conclusions than unresolved problems.

During the Lower Palaeolithic Afghanistan south of the Hindu Kush may have been part of the South Asian world. To the north, it certainly would have fallen into the orbit of Central Asia. No well documented Lower Palaeolithic remains have yet been found in Afghanistan, but there has been little concentrated effort to find them. Search is made difficult because of the rapid alluviation and erosion caused by tectonic uplift and also by thick accumulation of loess in the north. Despite these obstacles, Afghanistan is a promising source for the Asian Lower Palaeolithic record in both cultural-historical and adaptational terms.

By Middle Palaeolithic times there is no question that Afghanistan was inhabited. During this period there was a world wide expansion of human populations, and the movement into the continental interiors of Asia is well documented. Whether Afghanistan received populations from South Asia or Southwestern Asia during this period is unknown, and the typology of the Dara-i-Kur artifacts in northern Afghanistan give no definite indications either way. The important fact is, however, that a sapienized population was hunting sheep in the north during the Middle Palaeolithic, and this hunting adaptation continued in importance all the way into the Holocene.

There is no evidence for a "smooth" typological transition from the Middle Palaeolithic assemblage of Dara-i-Kur to the early Upper Palaeolithic Kara Kamar III lithics. The distinctiveness of the two assemblages, however, is not adequate ground to conclude that there was no continuity in occupation during this time or that Afghanistan played no role in



the evolution of Upper Palaeolithic technologies. The available C-14 determinations from the two sites, unfortunately do not have sufficient precision to help resolve this issue.

Kara Kamar III remains somewhat of an enigma. It may well represent the easternmost penetration of the early Upper Palaeolithic of Southwest Asia. It is clearly not related to anything in South or Central Asia. It is roughly contemporary with the Baradostian of the Zagros but is technologically and typologically distinct. To describe Kara Kamar III with the epithet "Aurignacian-like" is really to engage in word magic, and it does not increase our understanding of its origin or relationship to the early Upper Palaeolithic. Physically Kara Kamar is a small shelter and only a few major tool types are present. This may indicate that the site was a transitory hunting station. Hence, it is not a good "type site" for comparative typological purposes.

The Epi-Palaeolithic is known from several sites, the most notable being Aq Kupruk II and III. The indications are that there was a heavy dependence on sheep and goat hunting within the northern folds of the Hindu Kush. In more open locales, as in the Haibak area, gazelle was also an important species. There is absolutely nothing known about the plant foods gathered in northern Afghanistan during the Epi-Palaeolithic. Wild barley is known from the region, and some simple grinding tools are known from the Aq Kupruk sites. It is possible, therefore, that this annual grass was exploited.

As yet, none of the Epi-Palaeolithic sites give any indication of a high degree of sedentarization. The occupation levels are all thin and the areal extent of the sites is limited. It is probably safe to say that there was an increased overall population during the Epi-Palaeolithic compared to the early Upper Palaeolithic, but it is apparent that the Epi-Palaeolithic population was low in density and discontinuously distributed. There is, then, no evidence that the early domestication of sheep at Aq Kupruk II ( $10,210 \pm 235$  B.P.) was related to population pressure. Domesticated sheep are also known by about 8900 B.C. in the Zagros mountains at Zawi Chemi Shanidar (Perkins, 1964) where no case for local population pressure has been built either. A complex of interactions between human populations and wild sheep and goat in the Late Palaeolithic eventually led to their domestication, and northern Afghanistan was assuredly part of this process. Clearly the long term dependence on these species by the hunters and gatherers, changes in the species behaviour patterns, alterations in the early Holocene environment, and the availability of plant foods are all variable phenomena which need to be measured more closely before the process of animal domestication can be better understood. As Carleton Coon put it: "There is a lifetime of work in the caves of Afghanistan for a younger man" (1957: 254).

## Recent Finds

During August 1976 Louis Dupree and I made an archaeological reconnaissance in the Dasht-i-Nawar, a highland volcanic-tectonic depression located approximately 60 km west of Ghazni in central Afghanistan. The Dasht is a large, flat grassland plain with an average elevation of approximately 3100 m (10,170 ft) and is about 60 km long and 15 km wide. At the base of two low hills in the northern part of the Dasht, two surface concentrations of obsidian tools were

found. They were essentially lag deposits on a deflation surface. This is the first known occurrence of obsidian in Afghanistan in either a prehistoric or historic context. The source of the obsidian is definitely local; trace element analysis at the Lawrence Berkeley Laboratory, by F. Asaro, H. Michel, F. Stross and N. Hammond has confirmed its distinctive composition. The southern and eastern borders of the Dasht are formed by several volcanic cones. French geologists have already reported obsidian in this area. The Dasht-i-Nawar, therefore, should be added to the short list of obsidian sources in Southwest Asia. To the west, the nearest known obsidian area is Lake Van in Turkey.

The two sites were designated G.P.2 and G.P.4 (Ghazni Province). On the basis of technology and typology, they should be assigned to the Epi-Palaeolithic. The collection can be described as a bladelet and microblade industry with rare backed elements, geometrics, and burins. Slightly over 98% of the entire industry is obsidian, and the remaining fraction is flint. The microblades were produced from small cylindrical microblade cores (pencil or bullet cores), and only 7% of them were retouched or backed. G.P.2 and G.P.4 are the first Palaeolithic sites found south of the main divide of the Hindu Kush. Future survey and excavation in this area will undoubtedly reveal several more.

The Dasht-i-Nawar survey revealed no further traces of the Lower Palaeolithic industry earlier reported by Dupree (1974). It should, therefore, be regarded as still unsubstantiated.

Recent work by Soviet investigators has demonstrated bonafide Lower Palaeolithic sites dated to the end of the Middle Pleistocene in southern Tadjikistan only 100 km from the Afghan border (Lazarenko and Ranov, 1977). Ranov's excavations at the sites of Karakau I and Lakhuti I have revealed a pebble tool and flake industry with choppers, chopping tools and irregularly retouched flakes. The sites were found deeply stratified in thick loess deposits. This kind of deposit is well known in northern Afghanistan and thus provides an excellent opportunity to search for Lower Palaeolithic remains on Afghan soil.

In 1976 A. V. Vinogradov of the Soviet-Afghan Archaeological Expedition located a large number of surface Epi-Palaeolithic sites, Mesolithic in the Soviet terminology, between Tashkurghan and Andkhai on the lowland and arid Turkestan plain. The vast majority of these sites were discovered near the contact of the sandy desert and the alluvium deposited by the streams emanating from the Hindu Kush. The sites contain many geometric microliths and small blade tools.

# The Later Prehistoric Periods

*Jim G. Shaffer*

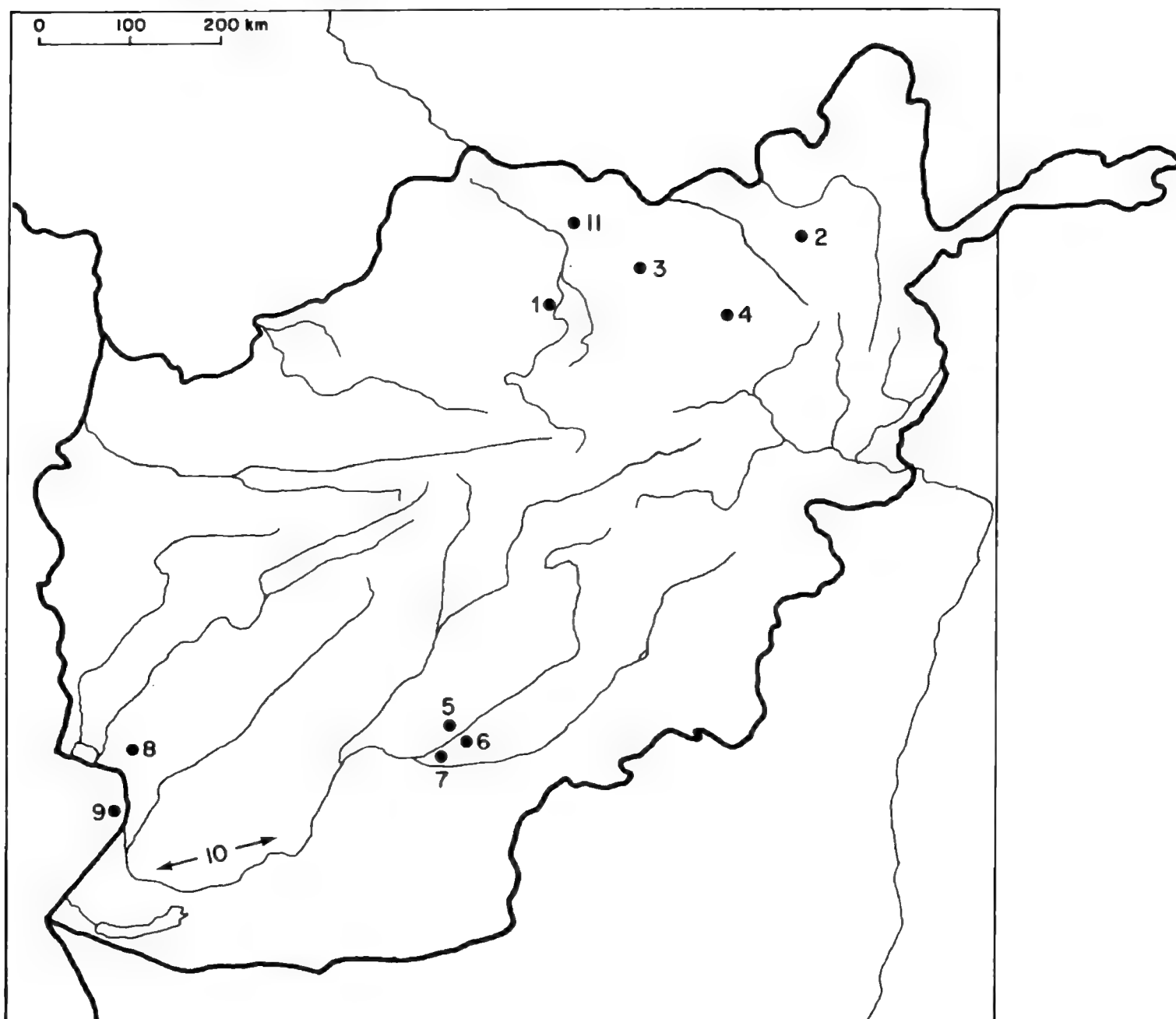
## Introduction

Like the Palaeolithic the later prehistoric periods of Afghanistan were essentially unknown until the French initiated excavations at Mundigak in the late 1950s. The importance of Afghanistan in later prehistoric times had been clearly demonstrated by the intensive prehistoric research conducted in Soviet Central Asia, Baluchistan and the Indus valley. However, it has only been within the last twenty-five years that knowledge about these periods in Afghanistan has transcended the realm of mere speculation. Even so, our knowledge to date hardly amounts to more than a thumbnail sketch of what occurred at a few sites (Fig. 3.1). Although limited, the available information clearly indicates that the prehistoric cultures which inhabited Afghanistan underwent fundamental socio-cultural changes and ecological adjustments that permitted the two most important transformations in later prehistory to occur—the development of an economy based upon domesticated plants and animals; and the development of stratified societies. These two important transformations, then, will be the focus of this discussion.

It is necessary, however, to preface the discussion of the later prehistoric periods by re-emphasizing a few of the general, but very important, aspects of the Palaeolithic presented by Davis (Chapter 2). First, that human occupation of the modern area of Afghanistan has a considerable antiquity. Second, that these indigenous hunters and gatherers were constantly undergoing socio-cultural changes in response to their ecological contingencies. Finally, that an essential part of their ecological adaptation was the exploitation of domesticable animals, and quite possibly plants. These are fundamental background factors which must be taken into consideration if the later prehistoric cultural developments are to be explained in terms of indigenous processes rather than simply attributed to the movement of peoples and traits from areas in the West to Afghanistan. It is only by attempting to understand prehistoric cultural developments in Afghanistan as resulting from indigenous processes and circumstances that a full appreciation of its general theoretical significance for understanding human behaviour as well as its own unique characteristics can be obtained.

## Development of Domesticates

The process of domesticating plants and animals is considered to be one of the most important transitions in human technological and cultural development. As such, it is comparable to



**Fig. 3.1:** Neolithic and Bronze Age sites. 1. Ghar-i-Mar and Ghar-i-asp. 2. Dara-i-Kur. 3. Tashkurgan. 4. Fullol (hoard). 5. Mundigak. 6. Said Qala. 7. Deh Morasi Ghundai. 8. Nad-i-Ali. 9. Shahr-i Sokhta. 10. Helmand river sites. 11. Dashli sites.

only three other such transitions: initial tool use by the earliest hominids; development of an urban way of life; and, development of an industrial economy. Each of these transitions represents fundamental alterations both in man's relationship with the physical environment and in his relationship with fellow men. A detailed discussion of the theoretical and methodological issues surrounding the development of domesticates is tangential to this summary of Afghan prehistory (see Wright, 1971 and Harriss, 1971 for important summaries). However, the Afghan material does have some important theoretical implications which will be discussed in the final section.

Attempts to summarize the prehistory of Afghanistan and neighboring areas (Allchin and

Allchin, 1968; Casal, 1969; Dales, 1965; Dyson, 1965; Wheeler, 1968) have all stated that domesticated plants and animals were the result of diffusionary mechanisms. The most recent, and most cautious statement of this view is by Fairervis:

In other words, wild wheat may be native to Afghanistan, for example; thus mesolithic society could have domesticated it there independent of the West, but when a cultivated wheat is found in an early site in Afghanistan associated with domesticated barley and goats (both not native to Afghanistan) it is probable, but by no means certain, that the whole complex was diffused from Western Asia, where all are found in domesticated form presumably at an earlier date (1971: 105).

The apparent willingness to attribute primacy to the Fertile Crescent and diffusion as the sole mechanism responsible for the presence of domesticates in Afghanistan is somewhat difficult to understand. The known data from three sites in Afghanistan seem scarcely sufficient to warrant such conclusions. Moreover, our knowledge concerning the natural distribution zones of domesticable species is limited and, therefore, the boundaries in the definition of so-called "nuclear zones" is also called into question (Higgs and Jarman, 1972). Thus, it is precisely those areas of Soviet Central Asia and Afghanistan, continuously referred to as representing important blanks in our knowledge of the distribution of domesticable species, which are in need of more detailed and extensive research (Jarman, 1972: 21-6). The limited amount of data implicitly suggests the possibility of domestication having occurred in areas outside the Near East. Indeed, the recent realization that domestication represents a process, a change in man-animal/plant relationships, rather than a specific event in time and space increases possibilities that this important transition was occurring in more than one place. The processual explanations hypothesized by Binford (1968) and Flannery (1969) may have been operative in more than one region (see also Dupree, 1964), or perhaps some as yet undetected complementary or supplementary processes were additionally responsible for such changes. With these possibilities and conditions as a framework, an examination of the limited, but suggestive, data concerning this important transition in Afghanistan is presented here.

The potential of Afghanistan as one of the areas which witnessed the domestication of plants and animals was first recognized by the Soviet botanists Vavilov and Bukinin (1929). Identifying several varieties of wild wheat in Afghanistan, they felt it might have been one of the original hearth areas for domestication. Yet in the last 45 years of prehistoric research no systematic investigation in this area of the Old World into domestication of plants and animals has been conducted. Indeed, if one considers the tremendous efforts expended on this problem in other areas the singular lack of data concerning Afghanistan is deplorable. To date our knowledge concerning this problem is limited to the results of excavations at only three sites; Ghar-i-Mar (Snake Cave); Ghar-i-Asp (Horse Cave), and Dara-i-Kur (Cave of the Valley) (Fig. 3.2). These sites were excavated as a part of Dupree's overall research into the Palaeolithic period of Afghanistan (for summaries see Dupree, 1972, 1973; Davis, 1972 and Chapter 2 of this volume), and provide all the known data about technological and sociological changes indigenous in this area. Although the definitive report has yet to appear on these excavations the preliminary results are very encouraging for further research.

All three sites are located in northeastern Afghanistan. On the basis of stratigraphic

Non-Ceramic	Ceramic								Ghar-I - Asp						
Non-Ceramic	Ceramic	Bronze Age								Ghar-I - Mar					
									Goat Cult	Dara - [- Kur					
			I	II	III <sub>1-4</sub>	III <sub>5-6</sub>	IV <sub>1</sub>	IV <sub>2,3</sub>	↔ ? ↔	V	Mundigak				
										I	II	III	IV	Said Qala	
											I	II	III	IV	Deh Morasi
									Sites 1-10					Dashli	
	I	II		III		IV						KGM			
											I	II	III	Damb Sadaqi	
PT?											II		III	IV	Gumla
									Early levels 16 to 4				Harappan	Kot Diji	
									IA	IB	IC	ID	Harappan	Amri	
									Early levels				Harappan	Mohenjo-Daro	
									I		II				Jalilpur
									I		II				Sarai Khola
									Sothi				Harappan	Kalibangan	
										I	II	III	IV	Shahr - I Sokhta	
									VI	V	IVC		IVB	IVA	Yahyo
Djeitun		I		II		III		IV		V	VI	Namazga			

**Fig. 3.2:** Comparative stratigraphy of select sites.

evidence and associated changes in the artifact inventory changes, Dupree (1972) defined the following periods: Non-Ceramic Neolithic A and B, Ceramic Neolithic, and “Goat Cult” Neolithic. The Non-Ceramic and Ceramic Neolithic periods were identified only at Ghar-i-Mar and Ghar-i-Asp while the “Goat Cult” Neolithic was found only at Dara-i-Kur. Because of the late date and special nature of the finds the “Goat Cult” Neolithic will be discussed separately. The Non-Ceramic and Ceramic Neolithic from Ghar-i-Mar and Ghar-i-Asp will be treated as representing common cultural phases indigenous at both sites.

Since the crucial aspect of technological innovation is domestication of plants and animals, it is appropriate that the floral and faunal evidence be presented. Unfortunately, the floral evidence, including carbonized grains, has yet to be analysed, and is not available. However, the faunal data has been processed by Perkins (1972) and already indicates that some important revisions be made concerning the natural range of domesticable species. To obtain a comprehensive picture of the situation it is necessary to review some of the evidence from the Palaeolithic periods. At Dara-i-Kur a Middle Palaeolithic (Mousterian) cultural complex was identified and dated to approximately 29,050 b.c. (Dupree, 1972: 79). Associated fauna included unidentified sheep/goat species and possibly cattle (*Bos primigenius*). Identification of these potentially domesticable animals at such an early date in Afghanistan in a context suggesting exploitation by man indicates that this area was indeed within the natural



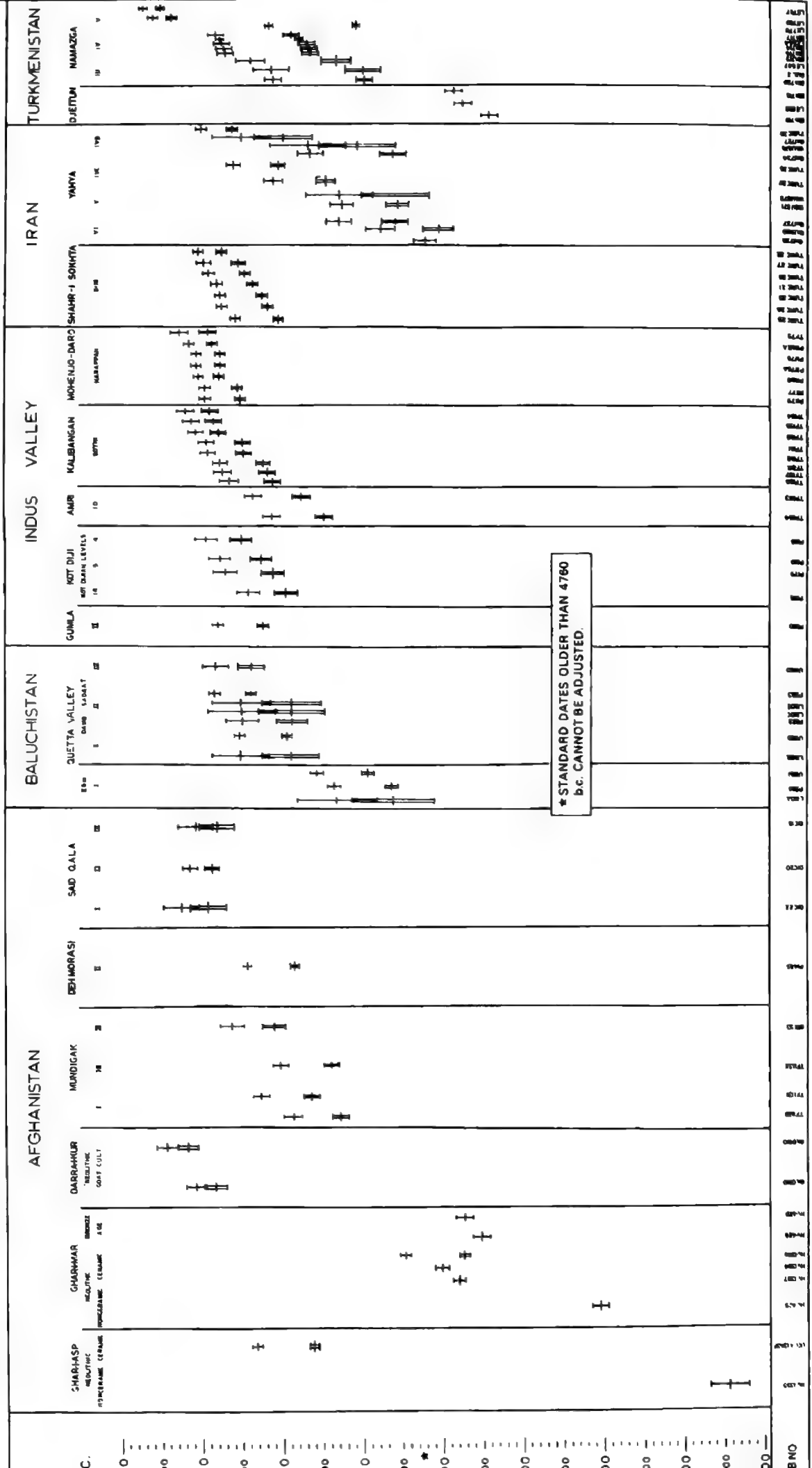
geographical range of these species before domestication. More important are the faunal remains found at Ghar-i-Mar and Asp in association with the Upper Palaeolithic (Kuprukian A and B) cultural remains (Perkins, 1972: 73; Dupree, 1972: 76-7). One carbon date of 14,665 b.c. is available for the earliest phase, Kuprukian B. Fauna identified with these cultural phases included: sheep (*Ovis orientalia cycloceros*); goat (*Capra hircus aegagrus*); sheep/goat (*Ovis/Capra*); horse (*Equus sp.*); dog (*Canis aureus sp.*); fox (*Vulpes sp.*); red deer (*Cervus elaphus*); and cattle/deer (*Bos/Cervus*). It is quite clear from even this limited evidence that wild predecessors of domesticable animals were present in this area and exploited by man. Furthermore, the number of specimens for these domesticable species (80 or 89% of the total identifiable remains; Perkins, 1972: 73) indicates some degree of selective exploitation of these animals. Similar contemporaneous patterns have been noted at several sites in Soviet Central Asia (Masson and Sarianidi, 1972: 14-32) which demonstrate that this is not an isolated phenomenon. While the present data is not sufficient to state positively that indigenous domestication of animals took place in Afghanistan and adjoining areas, it is sufficient to indicate that previous assumptions asserting that such animals were not found in the native environment of these areas, and therefore, that their presence in a domesticated state must be explained as a result of diffusion from other areas is simply untenable. Until more accurate data is available concerning the presence or absence of domesticable plants, similar assumptions about their diffusionary origins are unacceptable. The present data strongly pleads for an expansion of the conceptual frameworks explaining the technological and sociological changes which may have innovated within Afghanistan itself.

Fauna from the earlier Non-Ceramic Neolithic strata are referred to as domesticated by both Perkins (1972: 73) and Dupree (1972: 75-7). Unfortunately a discrepancy exists between fauna listed for Non-Ceramic Neolithic B by Dupree (1972: 76) and Perkins (1972: 73). It would appear that the fauna associated with the Ceramic Neolithic by Perkins is listed as being associated with Non-Ceramic Neolithic B by Dupree. However, the only domesticated fauna for which this discrepancy is relevant is cattle. Therefore, domesticated sheep (*Ovis sp.*), goat (*Capra hircus hircus* and *Capra hircus spp.*), and unidentifiable sheep/goat (*Ovis/Capra*) were in association with all strata referred to as Neolithic. The cattle (*Bos sp.*) bones are identified as being possibly domesticated. A complete listing of the non-domesticated fauna would include: red deer (*Cervus elaphus sp.*); gazelle (*Gazella subgutturosa spp.*); and, horse (*Equus caballus spp.* and *Equus spp.*). Having identified wild predecessors of domesticates in an Upper Palaeolithic context and fully domesticated forms in subsequent later strata (Neolithic), attention should focus on specific chronology.

The Non-Ceramic Neolithic has two radiocarbon dates (Fig. 3.3), one of 8566 b.c. and another of 6960 b.c. A larger sample of dates is available for the Ceramic Neolithic: 2685 b.c., 5018 b.c., 4549 b.c. and 5214 b.c. (Statistical errors are displayed in Fig. 3.3). Thus the cultural assemblages designated as representing Neolithic span six millennia! The confusion of such an extended time span is further complicated by the dating of a chalcolithic (metal using) cultural assemblage at Ghar-i-Mar which is stratigraphically later than but chronometrically earlier (5487 and 5091 b.c.), or contemporary with, the Neolithic assemblages. Traditionally the aberrant dates on both ends of the chronological spectrum might have been disregarded as representing contaminated samples. However, a more meaningful interpretation might be

# RADIOCARBON CHRONOLOGY 5730 YEARS HALF-LIFE

## I STANDARD DATES ±ADJUSTED DATES



g. 3.3: Radiocarbon chronology for Afghanistan and adjacent areas.

provided by examining what this complex data may indicate if focused on two basic, and related, problems. What does this data mean in relation to: (1) an early indigenous process for domestication in this area; and (2) the overall human adaptation to changing ecological relationships brought about by domestication of plants and animals?

A single ninth millennium b.c. date for domesticated animals is not in itself sufficient evidence for postulating an indigenous process of domestication. Certainly domesticated animals have been identified at earlier dates (9000 b.c.) in sites located to the West. However, this single date assumes new significance when considered with the identification of wild predecessors of domesticates in the Upper Palaeolithic levels at the same sites. The significance of the Upper Palaeolithic finds has already been noted, that the necessary animals were in the area and being exploited by man at an early date. The fact that fully domesticated fauna can be identified by 8566 b.c. indicates that this process had already occurred. Since biological characteristics denoting domestication were identified among these fauna then we may postulate that even before this date the processes responsible for such changes were already in operation. In other words, this date may be interpreted as a terminal rather than initial date demarking appearance of domesticated animals in this area. Therefore, one may expect with increased research that identification of transitional or initial domesticates (if such can be identified) will date even earlier (between 14,665 and 8566 b.c.). Identification of domesticable wild species and one rather early date for fully domesticated species forms are somewhat tentative bases upon which to hypothesize an indigenous domestication process. Albeit tentative, it is still a foundation upon which to construct a fuller understanding of the prehistoric processes occurring in Afghanistan. Before addressing the second problem of ecological relationships and the apparent long continuity of these Neolithic cultures, it is necessary to examine the presence of other associated artifacts.

From the available information, there do not appear to be any architectural remains associated with either the Non-Ceramic or Ceramic Neolithic. Because of sampling factors it is difficult to state that there was a positive absence of architecture. A possible significance of this lack of architectural remains will be discussed below. The major artifactual difference which distinguishes these cultural complexes is the presence or absence of ceramics (Fig. 3.4). Stratigraphically and chronologically the Non-Ceramic Neolithic is the earlier complex. It is the lithic implements which provide continuity between the Non-Ceramic and Ceramic Neolithic, and also distinguish it from the Upper Palaeolithic. Besides lithic remains the only other artifacts encountered were manufactured from bone. These bone artifacts included such simple tools as polished points, plain and decorated needles, awls (punches), and spatulas. However, it is lithic implements which dominate the culture inventory and must be discussed in detail.

There is little distinction between the Non-Ceramic and Ceramic Neolithic lithics but together they are very distinctive when contrasted with the underlying Kuprukian Upper Palaeolithic assemblages (Dupree and Davis, 1972: 28–30). This contrast is highlighted by the introduction of "sickle blades" with the characteristic sheen on the edges resulting from cutting of grasses. Other distinguishing artifacts were: one pressure flaked unifacial leaf-shaped point; a bifacial point fragment; many notched flakes; hoes; ground stone querns and pounders; celts; and steatite bowl fragments (Dupree, 1972: 76–7). Notched flakes occurred



**Fig. 3.4:** Neolithic material from cave sites in northern Afghanistan: (a)-(b) Ceramic Neolithic sherds; (c) "Goat cult Neolithic" sherds; (d) Bone needles, Ceramic Neolithic (?); (e) Perforated long bone, "Goat cult Neolithic"; (f) Diabase point, "Goat cult Neolithic".



in the Kuprukian Upper Palaeolithic but were fewer in number. Other artifacts which demonstrated a continuity with the Kuprukian are: large blades; points; and dihedral burins. The presence of sickle blades is extremely important for it demonstrates that populations who were exploiting domesticated animals were also exploiting some sort of grasses. A similar speculation might be presented for hoes, querns and pounders, but such artifacts have also been identified in an Upper Palaeolithic context in other localities (western Iran). Until botanical remains have been identified, it is impossible to know whether or not the grasses being exploited were domestic. However, the total set of circumstances suggests that they might well have been domesticates.

Ghar-i-Mar Non-Ceramic Neolithic A and B are basically similar but there are some important differences. Dupree (1972: 76) describes Non-Ceramic Neolithic A as having a smaller percentage of sickle blades and more closely resembling the Kuprukian than Non-Ceramic Neolithic B. In addition Non-Ceramic Neolithic A did not have the stone hoes, querns, pounders and steatite bowl fragments located with Non-Ceramic Neolithic B. Such items were also lacking in the Non-Ceramic Neolithic complex defined at Ghar-i-Asp. The lithics of Non-Ceramic Neolithic B are described by Dupree as:

Same as Ceramic Neolithic, but more sickle blades, plus cores, microblades, end and side scrapers, points, burins, occasional backed blades. One pressure-flaked, unifacial point (1972:76).

Almost exactly the same description is used for the Ceramic Neolithic at both Ghar-i-Mar and Ghar-i-Asp. It is interesting to note that the Ceramic Neolithic at Ghar-i-Mar also lacked stone hoes, querns, pounders and steatite bowl fragments. The overall impression of these Neolithic assemblages is one of continuity. Furthermore, there is nothing in the available information on the lithics to indicate that radical new tool inventories were introduced with the appearance of domesticates. There is also nothing to indicate that these Neolithic lithic assemblages did not develop out of the preceding Kuprukian.

Perhaps the most significant change, or addition, to the material culture inventory was pottery (Dupree and Kolb, 1972). The ceramics have only briefly been described in the preliminary report which makes it difficult to place this important cultural item in proper perspective. Dupree and Kolb give the following short description of the Neolithic ceramics:

The major type is a crude, soft, chaff, crushed-limestone and crushed-sherd tempered ware with flat bases simple rounded rims, probably basins and globular jar types. . . . Another better fired ware with zig-zag incisions . . . may also relate to this period, but more probably fits into the overlying Aq Kupruk Chalcolithic or even later (1972: 33).

Dupree (1972: 75) refers to this pottery as black, but the illustration shows a light colour fabric probably buff (Fig. 3.4a, b). No doubt a variety of colours were present due to differential firing. From the single illustration (Dupree and Kolb, 1972: 34, Fig. 118) and the associated stratigraphic problems (1972: 33) it appears that the designation of the harder incised ware as belonging to a later period is correct. Therefore, for the Ceramic Neolithic the associated ceramic is a soft, heavily tempered "crude" ware which was handmade (author's personal observation). However, one must be careful not to assign antiquity simply upon the basis of coarseness of manufacturing technique. More recent studies (Shaffer, 1972; 1974a) have shown that such "crude" and basket-impressed pottery have a very long

persistence during the prehistoric period. The presence of such types in a ceramic assemblage appears to be related to two factors: vessel form-function and economics of manufacture. These pottery types were very restricted in vessel forms when compared to contemporary types at the same site (Shaffer 1972: 109, 1974a). Vessel forms were usually deep straight sided bowls, simple jars, or very shallow bowls (plates). Quite often the vessels would have a heavy coating of carbon on the exterior as if they were exposed repeatedly to an open fire. The limited vessel form, constantly present, but changing in frequency throughout the sequence, and apparent useage near open fires (for many but not all examples), supports the conclusion that such types were common utilitarian vessels. The simple method of manufacture would have made them economical for such everyday use and, indeed, they could have been of household manufacture. The persistence of such types then for long periods in antiquity should not be unexpected and is, in fact, indicated by the present data. With this description of material culture associated with these Neolithic complexes, a discussion of the second problem of overall human adaptation to changing ecological relationships resulting from domestication of plants and animals can be considered.

Attempting to interpret the Non-Ceramic and Ceramic Neolithic assemblages Dupree (1973: 263) alludes to the possibility that these archaeological assemblages represent specialized pastoral nomads. However, it is not possible to base such an identification of pastoral nomadic on any specific artifact or set of artifacts. Except for the presence of a posthole pattern suggestive of a tent-like temporary dwelling there is nothing in the artifact inventory which is distinctively 'nomadic'. An argument might be made that the absence of architectural phenomena in itself is suggestive of a nomadic interpretation. On the other hand, given the limited nature of the excavations it would be misleading to ascribe the absence of architecture as sufficient evidence in itself for the differentiation of a pastoral nomadic assemblage. Similarly one cannot discount a pastoral nomadic interpretation simply because of the presence of tools usually associated with agriculture (sickle blades, milling stones, hoes, etc.). Some of these tools would be needed by pastoral groups to process cereals obtained by interaction with agriculturalists; or they might be needed as part of their tool-kit in compliance with providing a source of labour for agriculturists; they might have been necessary to enable the pastoral group to take advantage of wild crops or areas that could be dry-farmed; or they might have been utilized in any combination of the above circumstances. Perhaps the one physical factor which does argue for a pastoral nomadic interpretation is physical location in caves. Traditionally caves have been a favourite location for temporary encampments of pastoral nomads. Given the limitations of the available data it appears that Dupree's interpretation of these assemblages as representing pastoral nomadic groups certainly seems plausible. The existence of pastoral nomadic groups contemporaneous with earliest sedentary village agriculturists significantly alters current interpretative models about the socio-cultural and ecological contingencies surrounding the development of domesticates and the development of urban centres or civilization (Shaffer, 1974b; n.d.).

In light of the proposed nomadic interpretation for these early assemblages the presence of steatite bowl fragments is extremely interesting. Steatite bowls have recently been singled out (Lamberg-Karlovsky, 1972a; Lamberg-Karlovsky and Tosi, 1973) as an important trade item throughout the Iranian plateau in later prehistory. The chronological context of the



Afghanistan material indicates that trade of such items has a greater antiquity than previously expected. Furthermore, their identification in a nomadic context might be interpreted as indicating that such objects (and by analogy other objects such as lapis lazuli, shell, obsidian) were focal points of an exchange system which facilitated symbiotic interactions between nomadic and agricultural groups.

One final factor which should be taken into consideration is the long chronological persistence of these assemblages. One must always be cognizant of an extremely limited sample, but nonetheless some suggestion of the continuity of these assemblages can be proposed. If the assemblages represent early manifestations of a successful specialization in a pastoral economy than one might expect a rather high degree of consistency in the basic aspects of the associated material culture. This would be especially the case given the rather generalized tool inventory that pastoral nomads must have had prior to the introduction of metal tools. A pastoral nomadic explanation is also applicable to the contingencies surrounding the "Goat Cult Neolithic".

## The "Goat Cult Neolithic"

The archaeological assemblages recovered at Dara-i-Kur and identified by Dupree (1972: 12-3, 79, 81-2; 1973: 264-6) as the "Goat Cult" Neolithic is a classic example of an archaeological misnomer. The designation *Neolithic* conveys an antiquity and cultural contemporaneity for this archaeological assemblage which is neither warranted by the material nor implied by the excavator. The two C-14 dates for this material which with the MASCA correction factor (Dales, 1973) are 2190 and 1880 b.c., in conjunction with the presence of associated metal artifacts clearly indicate that this archaeological assemblage is not contemporary with the Non-Ceramic and Ceramic Neolithic periods. Indeed, its major feature, ritual goat burials, has its closest cultural affinity with the Late Bronze Age sites of the Dashli series in northern Afghanistan (Sarianidi, 1971a). This assemblage will be discussed here because it is felt that it represents another example of the specialized pastoral nomadic adaptation, and demonstrates the persistence of this adaptation through time.

Unfortunately the fauna remains from Dara-i-Kur have not yet been extensively studied or discussed. The following domesticated animals have been identified (Dupree, 1972: 79): goat, cattle, onager and horse. Wild fauna remains included: fox, marten, gazelle, birds, fish, rodents and tortoise. Without more information it is impossible to evaluate the faunal evidence.

The majority of lithic implements appear to be of two basic types (Dupree and Davis, 1972: 32; Dupree, 1972: 79):

... (1) excellent flint blades (some with fine alternate retouch), and possible sickle blades; (2) a series of relatively large diabase points with thickened cross section and exhibiting extensive use along both edges as well as the vertical ridge. . . .

Other lithic implements included: celts, slate knife and pendant, a broken jasper point, slate scrapers, limestone blade and bead (cylindrical), steatite spindle whorl, obsidian bracelet fragment (?), basaltic hammerstones, and a series of quartzite pebble tools. Bone implements

included: awls, needles, gouges, spatula, polishers, polished sheep astragali (gaming pieces?), and one perforated long bone which may have been either an ornament or amulet. There was also located one shell or "limestone" perforated disc bead. This inventory seems to represent a rather generalized collection of tools not very different from those delineated for the Non-Ceramic and Ceramic Neolithic described earlier. There are, however, three new categories of artifacts associated with the "Goat Cult" Neolithic that do make it very distinctive from the earlier material.

The first category is metal objects. Three fragments of a low-tin bronze artifact were associated with this assemblage (Caley, 1972: 45-6). Two of these fragments appear to be part of a pin while the third is a "... tapered rectangular rod broken off at one end and having a conical tip at the other" (Caley, 1972: 45). After making a component analysis Caley came to the conclusion that these items are probably of a local (i.e. Afghanistan) manufacture. The second major distinctive category of artifacts is the presence of architectural remains in the form of postholes which were described as:

A series of at least 80 post molds 2-4 cm in diameter was noted just under the lip of the cave, and may indicate the use of culinary racks, windbreaks, other shelters, tethering posts, etc. (Dupree and Kolb 1972: 35).

Presence of such post molds is highly suggestive of the possible presence of tents, especially in light of the pastoral nomadic interpretation of this material presented here. The final distinctive category of artifacts are the "goat burials" from which the assemblage got its designation as the "Goat Cult" Neolithic. Unfortunately due to the preliminary nature of the available report the description of these burials is very brief:

Three intentional pit burials of domesticated goats were uncovered. Two skeletons had been decapitated; one had the skull articulated. . . . Directly underneath and possibly in association with Burial 3, skull fragments and several long bones of one or two children were discovered (Dupree and Kolb, 1972: 34-5).

Whether the context of these burials warrants interpretation as a "cult" is debatable. However, the articulated burial of domesticated goats certainly indicates the important roles these animals held within the social group involved.

It is extremely difficult to utilize Kolb's analysis of the ceramics, which are neither adequately described nor illustrated. The following description is given of the ceramics from the "Goat Cult" Neolithic:

The Neolithic ceramics of Darra-i-Kur are totally different from those found at Aq Kupruk. The most distinctive ware, called Baba Darwesh Black by Kolb, is a crude calcite-tempered type which occurred in globular jar forms with medium necks and either slightly flaring or erect rims. Many of the sherds are reddish grey in colour, probably because of differential firing. Simple striated, incised, punctated, and channeled geometric decorations, such as chevrons, multiple parallel lines, outlined triangles, cross hatching, zig-zags, and ladder motifs are common. . . . Several sherds had finger-impression designs; some interior bases had textile or basketry impressions (Dupree and Kolb, 1972: 34).

In addition to the above, Dupree (1972: 79) mentions the presence of perforated sherds,

pottery discs and abundant pottery wasters. As described except for the addition of simple geometric decorations there is not much difference between the pottery of the "Goat Cult" Neolithic and that of the Ceramic Neolithic: they are both apparently handmade wares with coarse tempering and manufactured in the same basic globular-jar vessel form. The basic continuity demonstrated by these ceramics might well be due to the fact that they fulfill a basic requirement in a nomadic toolkit, an easily manufactured, all purpose utilitarian container (Shaffer, 1974a: 153-6).

The above brief description of the "Goat Cult" Neolithic of Dara-i-Kur includes all currently available data. The existence of this late prehistoric possibly pastoral nomadic complex demonstrates the plausibility of a long continuity for such a specialized ecological adaptation. Furthermore, the similarity in material culture (goat burials) and possible chronological contemporaneity with the more culturally complex and sedentary sites of Dashli makes it likely that significant interaction occurred between nomadic pastoralists and sedentary agriculturists.

## The Sedentary Agriculturists

Up to this point the discussion here has centred upon the description of archaeological assemblages which appear to represent groups of specialized pastoral nomads. Ethnographically it is known, however, that specialized pastoral nomads maintain multiple systemic interactions with specialized sedentary agriculturists resulting in development of symbiotic relationships between the two groups (Barth, 1961). Therefore, it is postulated here that the domestication of plants and animals resulted in an initial stage of mixed farming which in turn, due to ecological and demographic circumstances, resulted in the *contemporary development* of specialized subsistence economies based upon sedentary agricultural and pastoral nomadism (Shaffer, 1974b, n.d.). At this point then it would be logical to present the evidence for the existence of such agriculturists. Archaeologically such sedentary farmers would be differentiated from pastoral nomads by the contemporary existence of sedentary villages with substantial architecture and associated artifacts. To date in Afghanistan not one sedentary farming village has been located which is contemporary with the archaeological assemblages previously discussed. This lack of evidence is not unexpected considering the limited sample size, and the current state of prehistoric research in Afghanistan suggests that such sites are yet to be discovered. In this respect a series of low mounds located immediately north of the Hindu Kush in the Tashkurghan region which are covered with microliths and other artifacts is very suggestive of the existence of such early farmers (Dupree, 1967: 12 and personal communication). No doubt future research will reveal such mounds in other areas, and testing the lowest levels of some of the thousands of mounds dotting the Afghan landscape north and south of the Hindu Kush will eventually define such early sedentary agriculturists. However, it is necessary at present to look beyond the boundaries of Afghanistan for examples of early farmers which may provide an analogous picture of such groups.

Perhaps the most analogous cultural manifestation comes from Soviet Central Asia and the cultural complex referred to as Djeitun (Masson and Sarianidi, 1972: 33-46). The Djeitun

culture was selected on the basis of geographical proximity, and because of the well recognized similarity in cultural material and development noted in later prehistoric periods (Biscione, 1973; Lamberg-Karlovsky and Tosi, 1973; Meadow, 1973; Piggott, 1947, 1950; Tosi, 1969, 1973; Wheeler, 1968). Given the assumption here that such later cultural similarities are a result of indigenous cultural processes involving this area and Afghanistan, it is equally valid to assume that a certain degree of similarity existed in earlier periods. The following brief description of the Djeitun culture is presented to help fill an information gap created by lack of research on contemporary cultures in Afghanistan.

The Djeitun culture (summarized from Masson and Sarianidi, 1972) has been identified at several southern Turkmenia sites. Several phases of development have been defined the latest dating to 5050 b.c. and therefore roughly contemporary with the Afghan Non-Ceramic and Ceramic Neolithic. Grains of domesticated barley and wheat as well as domesticated sheep and goat remains have been identified at Djeitun sites. However, in the early phase of development hunting continued to have an important role as indicated by the identification of several species of wild animals (gazelle, onager, wild pig and sheep, fox and wolf).

Djeitun houses were rather standardized in proportions, dimensions, construction and layout. Construction was of mud brick and the overall shape was basically rectangular or square. Internal hearth structures were located just to the right of the doorway. Often houses had interior partitions, storage bins and subterranean storage pits. In the earlier phases house floors and walls were sometimes plastered with a lime mixture, or a fine clay, and occasionally painted. The average size of these habitations was 20-30 square metres. Every house had a courtyard containing out-house structures. These courtyards varied in size and were occasionally shared by two-dwellings. Besides habitation structures and courtyards another type of structure was also described by Masson and Sarianidi:

In various parts of the village, structures were excavated which most likely represent the foundations of platforms for grain storage. They consist of two rather squat parallel walls, high enough from the ground to ensure aeration of grain (1972: 38).

Located on the edges of settlements were walls which were thicker than those constructed for habitation or courtyard use. However, no definite encirclement pattern has as yet been delineated.

A basic feature of the toolkit was microliths, both blades and various geometrics (trapezes, lunates and triangles). Important tools manufactured from such microliths were side scrapers, spoke-shaves, graters and sickle blades. In later phases, there is a notable decrease of such microliths in favour of larger implements particularly denticulate-edged sickle blades. From analysis of wear-traces it appears that a large number of scrapers were utilized in animal skin processing. Less frequently encountered were ground and/or polished stone implements such as: flat discs, pestles and mortars, querns, axe/adzes and chisels. Bone tools usually consisted of awls, gouges, needles, points, spatulas and an occasional shoulder blade scraper. Other non-ceramic artifacts included various beads (bone, shell and semi-precious stones such as turquoise) and a few stone animal figurines.

Djeitun ceramics are extremely important and demonstrate a rather well developed industry. All of the ceramics are either handmade or manufactured on a very slow wheel and

made from a chaff-tempered paste. Vessel shapes included globular jars, bowls and even small beakers. The decoration consisted mainly of red geometric motifs executed on yellow-buff backgrounds. Decorated surfaces were often polished. Initially most decoration consisted of simple parallel rows of wavy lines and vertical bracket-like lines, with triangular patterns being rare. In the later phases these motifs decline in favour of increased usage of rectangular designs, dotted patterns and triangles. Finally the

. . . pottery decoration becomes more dissected and diminutive in the third period when designs were often painted also on the inner surface of the pots. The decoration is in the form of undulating lines, vertical zigzags, and tree-like patterns (Masson and Sarianidi, 1972: 40).

Other artefacts which were made from clay included: conical, disc and square beads; conical gaming-pieces; bracelets, and figurines. Figurines were both anthropomorphic and zoomorphic. Zoomorphic forms included sheep/goat and bovids. Human figurines consisted of human faces modelled in the flat and seated figurines (female?). These figurines will be an important point of discussion in the later prehistoric periods.

The overall impression of the Djeitun culture is one of a prosperous agricultural development adjusting to local ecological contingencies. The presence of semi-precious stones such as turquoise indicates the possibility of interaction with outside areas. Although an identical archaeological culture may not be identified in Afghanistan, it is suggested that a similar one will be eventually.

There are a few other cultures which might be utilized for comparison and analogy like the Djeitun. Period VI at Tepe Yahya (Lamberg-Karlovsky, 1970; Lamberg-Karlovsky and Tosi, 1973) is another geographically proximate manifestation of such an early agricultural culture (4500-3800 b.c.). However, it is neither as early as Djeitun, nor does this area of southeastern Iran demonstrate the close cultural affinities in the later prehistoric periods with developments in Afghanistan as do the prehistoric cultures of Soviet Central Asia. Analogies between Tepe Yahya Period VI and possible developments in Afghanistan might be misleading; there is, however, another cultural complex that is possibly analogous to developments in Afghanistan, that of Kile Gul Mohammad I-II (Fairservis, 1956).

Kile Gul Mohammad (hereafter abbreviated as KGM) I-II was defined in the Quetta valley of Pakistani Baluchistan just across the border from the prehistorically important Kandahar region. Like Soviet Central Asia, the Quetta valley demonstrates a close cultural affiliation with contemporary developments in Afghanistan during later prehistoric periods, and there is a pronounced similarity between Quetta valley material and that of Soviet Central Asia itself. Unfortunately more than a little controversy has centred upon the interpretation of this material, both with regard to method of excavation and the fact that only an extremely small sample of material is available. Originally Fairservis (1956, 1959) distinguished KGM I from II on the presence of pottery. There was a complete absence of pottery in KGM I and a quantitatively increasing amount of various pottery types in KGM II. Subsequent divisions (KGM II, III and IV) of this cultural complex were likewise based upon ceramic distinctions. Dales (1965: 260-1) and Mughal (1970: 261-8) while accepting the validity of KGM I as a distinctive cultural phase of development have, on the other hand, rejected the subsequent periodization of KGM II-IV. Both Dales and Mughal have objected not only to Fairservis's



basic ceramic typologies but have also questioned whether the divisions based upon quantitative histories of the types involved are justified: both argue for a retention of KGM I as a legitimate cultural entity but interpret KGM II–IV as representing a single cultural phase of development. More recently Fairservis (1971:137, no. 29) has slightly revised his original interpretation, and due to the very small sample of material involved now considers KGM I and II to be a single phase representing essentially the same cultural assemblage, while retaining the distinctions between KGM III and IV. The only resolution to these different interpretations is additional excavations of similar material. Until further excavations are conducted, it is a moot point which interpretation one accepts, and a yet different interpretation is presented here: Fairservis's recent combining of KGM I and II into a single cultural phase is accepted, while agreeing with Dales and Mughal that perhaps KGM III and IV should be considered as a single cultural phase. Given the very small sample of material involved it is agreed with Fairservis that the presence or absence of ceramics in face of the similarity in all other artifact categories is not sufficient for designating a separate cultural entity; the important aspect of KGM I and II is that they represent a group of sedentary agriculturists dependent upon domesticates. Combining KGM I and II emphasises the importance usually placed upon the dichotomy of handmade vs wheelmade pottery. Traditional assumptions have been that handmade pottery is chronologically earlier and represents a more "simple", technologically speaking, culture. Recent studies (DeCardi, 1970; Shaffer, 1972, 1974a to cite a few) have increasingly indicated that handmade wares, even basket-impressed pottery, have an extremely long chronological persistence and occur simultaneously with wheelmade wares. Handmade pottery appears to be related more to functional/economic factors than with those of chronological/technological sophistication. Finally, we have separated KGM II from III primarily on the occurrence of metal artifacts in the latter; the importance of these will be discussed later. A summary of the KGM I–II assemblage can now be given.

The excavations of KGM I–II were so limited (a 1.75 m square by 7 m deep) that it is difficult to do more than note the presence of various cultural items. Initial occupation structures were constructed from *pisé* and wattle and daub while later in KGM II structures were of mud brick and *pisé*. Several structures were encountered but the limited size of the excavations prevented delineation of details. Stone tools consisted of ground stone (milling stones and pestles) as well as chipped stone blades, sickle blades, cores, scrapers and choppers made from flint/chert, jasper or chalcedony. Bone implements were limited to the usual simple awls, points and spatulae. Faunal analysis indicated the presence of not only domesticated sheep/goat but also cattle.

By far the most important artifact category is ceramics. Pottery was confined to KGM II levels, in an even more limited sample (a 1.75 m square by 2 m deep). An extensive description and discussion of Fairservis's ceramic analysis is not relevant to our purposes here. It will suffice to mention that twelve different types are listed for KGM II with those quantitatively dominant being handmade. One of these types was a basket-impressed fabric and another a smoothed/polished surface with applied red paint and a dominant vessel form of an open bowl. Almost all of these types persisted into the later KGM III–IV periods demonstrating a high degree of cultural continuity.



Chronologically KGM I-II is much later than Djeitun, but then all of our evidence comes from a single site. Three C-14 dates are available for KGM I (Fairservis, 1971: 396) which when corrected for the new half-life are 3468, 3688 and 3712 b.c. If the new MASCA correction factor is taken into consideration then the date for KGM I might be extended as far back as the middle of the fifth millennium B.C. (c. 4500 B.C. - Dales, 1973: 159).

Although the data from Pakistani Baluchistan is limited and fragmentary, it does indicate, when taken into consideration with Soviet Central Asian material, that there was widespread occurrence of sedentary agricultural groups along the borders of Afghanistan. There is no reason to doubt that with future research similar, if not directly related, cultural phenomena will be defined within modern Afghanistan. Wider, more encompassing, cultural correlations and affinities have been developed for both the Djeitun (Masson and Sarianidi, 1972: 45-6) and KGM I-II (Dales, 1965; Mughal, 1970: 261-92) cultures, but these relationships are not relevant here. There is, however, one additional site located in Pakistan which might eventually prove to relate to developments in Afghanistan: Gumla, (Dani, 1970-71) located in the Gomal valley, one of the main routes between the Indus valley and Afghanistan in later prehistoric and historic times.

Gumla is included here because the extensive collection of female figurines and some of the ceramics from the later periods (II-III) at this site have direct parallels, if not imports, in Afghanistan. However, at this point in the discussion only Period I, which has been compared to KGM I by Dani (1970-71: 168), need concern us. No structures are associated with this period but several large circular ovens, or roasting pits, have been defined. Faunal remains found in association with these pits appear to be those of domesticated sheep/goat and cattle (1970-71: 41). No ceramics have been found from this period. The major category of artifact, that of lithic tools, includes cores, parallel sided blades, burins, flakes, awls and scrapers. Several examples of such tools have been identified by Dani as being microlithic. Ground stone tools included: saddle querns, rubbing stones, stone balls and pestles. Dani (1970-71: 41-2) suggests that this period represents an extremely mobile population, a notion relevant to the discussion earlier in this chapter. Unfortunately, there are no C-14 determinations for this complex.

This brief summary of the Djeitun, KGM I-II and Gumla I cultures provides a possible picture of early sedentary agriculturists in Afghanistan, although when contemporary cultural complexes are defined in Afghanistan, they will doubtless present differences from as well as similarities with those groups. The transition to a subsistence dependent upon utilization of domesticated plants and animals resulted in the development of specialized nomadic and agricultural groups. However, this transition stimulated additional processes of cultural, economic and ecological change which resulted in even more complex ecological and cultural adjustments, which in turn resulted in another equally important transition—the transition to a socially stratified way of life.

## Development of Stratified Society

The cultural phenomena which will be discussed under the rubric of “stratified society” here are equivalent to what would be traditionally discussed under the category of civilization,

urban societies, pristine or primitive states, or complex society. These traditional categories have attempted to delineate those artifacts, or artefact-complexes which indicate that this important transition has occurred. This "artifactual approach" has become increasingly unsatisfactory as anthropologists have realized through comparative studies that these artifacts and/or their associated socio-cultural institutions "... have combined in different ways in different cultures and at different times" (Wheatley, 1972: 623) to produce stratified societies. Moreover, the emphasis upon identifying traits has detracted from the fact that this transition centres upon changes in man's socio-cultural relationships within a given context (for discussion see Service, 1975: xi-20). An extensive discussion of the theoretical issues and debates surrounding the definition of, and processes responsible for the development of stratified societies are beyond the purpose of this chapter (but see Service, 1975). It will here suffice to state what is meant by a stratified society and how it will be identified in the archaeological context.

A stratified society is defined here, after Fried (1967: 186), as "... one in which members of the same sex and equivalent age status do not have equal access to the basic resources that sustain life." Like Fried, basic resources here means capital, not consumer goods. Therefore, we are concerned not with large quantities of foods or tools but rather with their ultimate source (agricultural land and/or animals and sources of raw materials for tool production). However, it must be assumed that in an archaeological context the ability to accumulate certain types of objects is reflective of the degree of access to such basic resources.

Taking into account the limited data from Afghanistan, the presence of metal artifacts will be interpreted here as indicating that a transition to a stratified society *is taking or has taken place*. The utilization of metal artifacts as an indication of stratified society may rouse accusations of "technological determinism", and that metal artifacts have been found in association with what appear to be egalitarian Neolithic societies in areas such as the Aegean and Eastern Europe. No one will deny, however, that metallurgy does represent an important technological achievement in itself, and that as a technology it had repercussions in related and unrelated technological, social and economic behaviours. It also represented a new form of wealth. The obtaining, smelting and casting of metal ores represents a concerted effort of organization unparalleled in the production of any lithic artifact. The production of superior tools, in terms of strength and efficiency, cast from metal enabled the manufacture of subsequently finer objects made from stone which were utilized in subsistence and non-subsistence activities. The manufacture of metal artifacts represented a new level in the development of the concept of wealth as expressed in objects other than consumable food objects which again had pronounced effects upon all sectors of social life (Renfrew, 1972: 483). Finally, development of the alloying process of copper and tin (or other metals) allowed, for the first time, a significant and qualitative increase in the range of artifacts which could be produced in terms of utilitarian tools, weapons and luxury items, whose possession then bestowed new levels of status, prestige and efficiency upon the possessor. Moreover, metal artifacts can be located in a wide variety of cultural circumstances, are easily identifiable in the archaeological record, and can be subjected to quantitative and distributional studies.

Archaeological research in Afghanistan concerned with stratified societies has been in two regions, north and south of the Hindu Kush. In northern Afghanistan there are four sites, or groups of sites, relevant to this discussion: (1) the Chalcolithic or Bronze Age levels at Ghar-i-Mar (Dupree, 1972); (2) the "Goat Cult" Neolithic of Dara-i-Kur (Dupree, 1972); (3) possibly some material from the Tashkurghan area (Gouin, 1972); and, (4) the Dashli series of sites (Sarianidi 1971a). In southern Afghanistan research has centred on the Kandahar region and excavations at the sites of: (1) Mundigak (Casal, 1961); (2) Deh Morasi Ghundai (Dupree, 1963); and, (4) Said Qala Tepe (Shaffer, 1971, 1972). The material from Ghar-i-Mar is chronologically the earliest and will be discussed first. Then the extensive remains at Mundigak and the contemporary materials from Deh Morasi and Said Qala will form the bulk of the discussion about this later prehistoric period. Finally, the remaining sites in the north will be examined to complete the archaeological picture.

## Ghar-i-Mar

Although Dupree (1972: 25, 1967: 25) refers to the limited archaeological assemblages at Ghar-i-Mar for this period as Chalcolithic, a period characterized by presence of copper but not bronze, the analysis of the associated metal artifacts by Caley (1972: 44-5) clearly indicates that its composition was a low-tin bronze. The important aspects of this assemblage are the identification of these bronze artifacts and the two C-14 determinations of 5487 and 5291 b.c. These are the earliest dates for bronze artifacts yet recorded, but are slightly older than those associated with the stratigraphically earlier Ceramic Neolithic. The dates are interpreted here as indicating that both assemblages are chronologically close in the last half of the sixth millennium b.c. Dupree has separated these assemblages on the basis of stratigraphy, pottery and the presence of metallurgy, but the material culture of the two assemblages (Ceramic Neolithic and Chalcolithic) is not otherwise significantly different. This is not unexpected for two reasons. First, as has been demonstrated in other areas such as the Aegean (Renfrew, 1972), the introduction of metallurgy often takes a long time before its full cultural-social-economic effects are manifested and detectable in the archaeological record. Second, if the assemblage associated with the metal artifacts reflects a specialized adaptation to pastoral nomadism as is proposed here (as it was for the Ceramic Neolithic) then such similarity can be attributed to this specialized adaptation and the material culture necessitated by it.

The metal artifacts (Caley, 1972: 43-5) located at Ghar-i-Mar consisted of three fragments of sheet metal with an embossed motif, two fragments of a rectangular rod, and one other sheet fragment. Caley (1972: 45) maintains that the composition of the metal was soft enough for the embossed design to be produced by hammering on a soft substance (wood) when the metal was heated. The reconstructed original composition of these artifacts indicate a very high percentage of copper with about 7% tin and traces of iron and nickel, a composition which, according to Caley, is characteristic of the early stages of bronze metallurgy.

Lithic artifacts are summarily described by Dupree (1972: 75) as consisting of flint cores, sickle blades, blades, possible burins, perforators and end-scrapers on blades; no geometrics

but many micro-blades were also associated with this level. This is identical to the lithic material described by Dupree for the Ceramic Neolithic. Bone artifacts included points, awls, and needles. The fauna identified at the site included domesticated sheep, goat, cattle and possibly onager (Dupree, 1967: 26, 1972: 75), but a detailed discussion has yet to be published. Dupree (1967: 26) also notes the possibility that molluscs might have been of some dietary importance.

Available ceramic descriptions (Dupree and Kolb, 1972: 33–4; Dupree, 1967: 25, 1972: 75) are incomplete. One pottery type is described as being a soft ware similar to that of the Ceramic Neolithic, and the other as a hard greyware much better fired than that of the Ceramic Neolithic with incised motifs (zigzags) under the rim (Dupree, 1967: 25, 1972: 75). Both types are characterized by coarse tempering materials including limestone, crushed rock or pebble, chaff and crushed sherds. Vessels were made by coiling, slab-building and modelling which utilized either a slow wheel (*tourne*) or an unpivoted turning slab. Rims were manufactured separately and then joined to the vessel body. The vessels had well smoothed surfaces but no evidence of a slip, self-slip, wash, paint or polish were found. Besides the incised motifs the only other decoration occurred on a single sherd as a ‘. . . button-node applied . . .’ (Dupree and Kolb, 1972: 34). Dupree (1972: 75) notes that a few sherds have basket-impressions, but these are probably related to techniques of manufacture rather than decoration. The major vessel form was a globular jar with a flat or rounded base, but basin forms were also recorded.

Much of the importance of this site lies in the late sixth millennium b.c. date for bronze technology, one of the earliest dates for such technology recorded, and should the identification of domesticated cattle and onager be substantiated the site will be of even greater importance; until further comparative or contemporary material in either northern or southern Afghanistan is forthcoming, though, the fact that bronze does not appear at any other site in Afghanistan or its hinterland until one-and-a-half millennia later, and the non-diagnostic character of the ceramics make it impossible at this time to create any specific cultural perspective for the Ghar-i-Mar material.

## Southern Afghanistan

At present our information for this area comes from excavations at three sites—Mundigak (Casal, 1961), Deh Morasi Ghundai (Dupree, 1963), and Said Qala Tepe (Fairservis, 1952; Shaffer, 1971, 1972)—and three site surveys of the Seistan area (Fairservis, 1956; Hammond, 1970; Dales, 1972). While limited the sample size is sufficient to indicate that southern Afghanistan is an important area for understanding the transition to stratified societies and for comprehending the cultural processes which affected neighbouring areas. The Mundigak sequence has for long been crucial to the entire area between the western Iranian plateau and the Indus valley. More recent excavations at Tepe Yahya (Lamberg-Karlovsky, 1970) and Shahr-i-Sokhta (Tosi, 1969) have greatly contributed to our knowledge of this vast area, but they too derive some of their importance from relationships established with Mundigak. Mundigak and the supplementary information from Deh Morasi Ghundai (hereafter Deh

Morasi) and Said Qala Tepe (hereafter Said Qala), provide information for understanding the cultural processes linking the areas of Baluchistan and the Indus valley to Soviet Central Asia and eastern Iran.

### *Geographical Factors*

The site of Mundigak is a series of mounds situated in a mountainous region approximately 55 km west by north of modern Kandahar, located in the upper drainage of the Kushk-i-Nakhud Rud which roughly parallels the Arghandab river as it flows west past Kandahar. The Kushk-i-Nakhud Rud flows southwest, eventually joining the Arghandab approximately 110 km southwest of Kandahar. Like most areas of Afghanistan this region is arid. The Arghandab flows from north to south until it passes Kandahar where it turns westward and joins the Helmand approximately 130 km southwest of Kandahar at Bust. The Helmand then flows south and west then north until it reaches the large marshy, but today extremely arid, area of Seistan on the Iranian border which has in Afghanistan only had surface survey for prehistoric sites, and limited excavations. Before the Arghandab-Helmand streams turn to the southwest they form the northern boundary separating the cultivable lands to the north from the arid Registan desert. Once the Helmand begins its southwestward course it passes through some of the most arid regions in the world. The Helmand is actually the only major perennial river located between Mesopotamia and the Indus valley, and its importance in prehistoric cultural developments throughout this vast area cannot be overemphasized (for a good environmental summary of this region see Fairervis, 1961; Dupree, 1973: 1-54). The location of Mundigak within the drainage of one of the major tributaries of this system is a major factor in understanding the cultural processes and phenomena which are reflected at this site.

Similar conditions may be defined for the related sites of Deh Morasi and Said Qala, both located within 30 km of Kandahar and about 100 km southeast of Mundigak, on the flood plain separating the Arghandab and Tarnak rivers. The Tarnak runs parallel to the Arghandab and flows into the Dori south of the sites. The Dori in turn flows west to join the Arghandab about 70 km southwest of Kandahar. The proximity and location within the same river system is important to the close relationships definable between these southern Afghan prehistoric sites.

## Mundigak

Casal's excavations at Mundigak (Figs 3.5-3.40) still represent the major research effort concerned with these later periods of prehistory. At Mundigak during the middle and late 1950s the French Archaeological Mission in Afghanistan (D.A.F.A.) conducted a continuous series of extensive excavations at this site. These excavations defined seven major occupation periods of which the first five are of concern here. Chronologically these periods represent a time span of approximately 3000 years from the beginning of the fourth to sometime in the second millennium b.c. During this time span Mundigak developed from a small agricultural village (Periods I-III) to a major urban centre (Period IV-V) and then was abandoned during



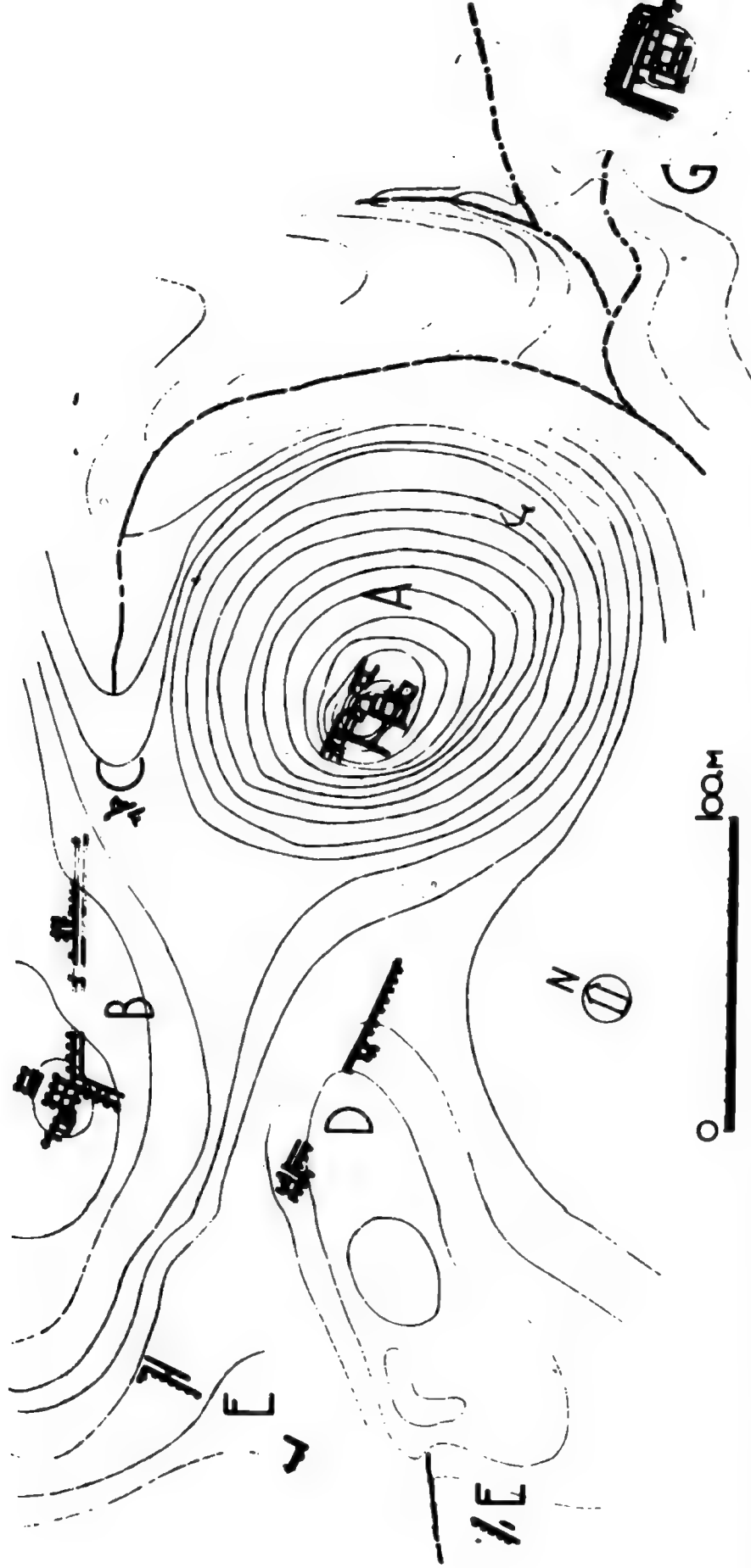


Fig. 3.5: Mundigak: General plan of ramparts and building of Period IV<sub>1</sub>. (From Casal, 1961, as are other Mundigak figures)

the Iron Age. The complete occupation sequence was defined only at Mound A (Fig. 3.5), but during the urban period several adjacent mounds were occupied by habitation and "public" structures. Particularly in the case of Mundigak it should be noted that much more information could have been derived from these excavations had the data been quantified, but then this is an aspect of data retrieval which is missing in site reports throughout this area of the world both past and present. The Mundigak report is already more than 15 years old, the excavations more than 20, and Casal's training even older. Remembering these limitations a discussion of the Mundigak material is presented here.

### *Stratigraphy and Architecture*

The initial occupation at Mundigak, Period I, was subdivided into five phases (I<sub>1-5</sub>). These divisions were based upon structural and cultural correlations. Period I<sub>1-3</sub> are, however, very incompletely known since the total sample came from a sondage 10 m by 6 m, and all three phases accounted for less than 1.5 m depth of deposits. Phases 4-5 are known from a much larger sample (maximum dimensions of 29 m by 18 m with 2.5 + m deposits) and, therefore, are more completely known. Phase 1 and most of 2 are located directly above virgin soil, while Phases 3-5 are superimposed directly atop each other.

Phases 1-2 are devoid of any substantial architectural remains. Their delineation is based solely upon depositional soil differences and artifact content. Casal refers to the possible existence of tent-like structures for these phases but the evidence as presented is not convincing. The first substantial, or permanent, structure was encountered in Phase 3; and consisted of two *pisé* walls. *Pisé* is a construction method which involves the manufacture of a building "paste" from a mixture of clayish soil with a tempering material, usually chaff. This mixture is then built to a height of less than a meter and allowed to dry. Once dry another layer is constructed atop the dry one and so on until the desired height is reached.

The first mud brick habitations were encountered in Phases 4-5. Phase 4 structures are all rectangular single room units of varying sizes. The two completely excavated units are small (3 m by 2 m) when compared with the obviously larger incompletely excavated units of that phase. Walls were constructed with single or double coursed bricks, and the two complete structures have doorways. Most structures have their walls reinforced with interior and/or exterior buttresses. Rectangularly shaped, interior ovens or hearths are located in three of the units. These features are constructed through the use of *pisé* and protrude a few centimetres above the floor. Our knowledge of Phase 4 structures is the more incomplete since they were disturbed by the construction of Phase 5 structures.

A significant alteration in construction technique occurs with Phase 5 structures (Fig. 3.6a). These structures are characterized by the laying of a foundation of *pisé* sometimes mixed with stones below the immediate living surface (a wall trench) which should have strengthened the walls considerably. Houses continued to be rectangular in shape, and three were characterized by interior partition walls with doorways to allow access from one room to another. Access to the interior of the structures was *via* lateral doorways. However, some structures had no evidence of such doorways indicating that access was either through an elevated doorway or *via* the roof. Two examples of rectangular *pisé* inner ovens are recorded.

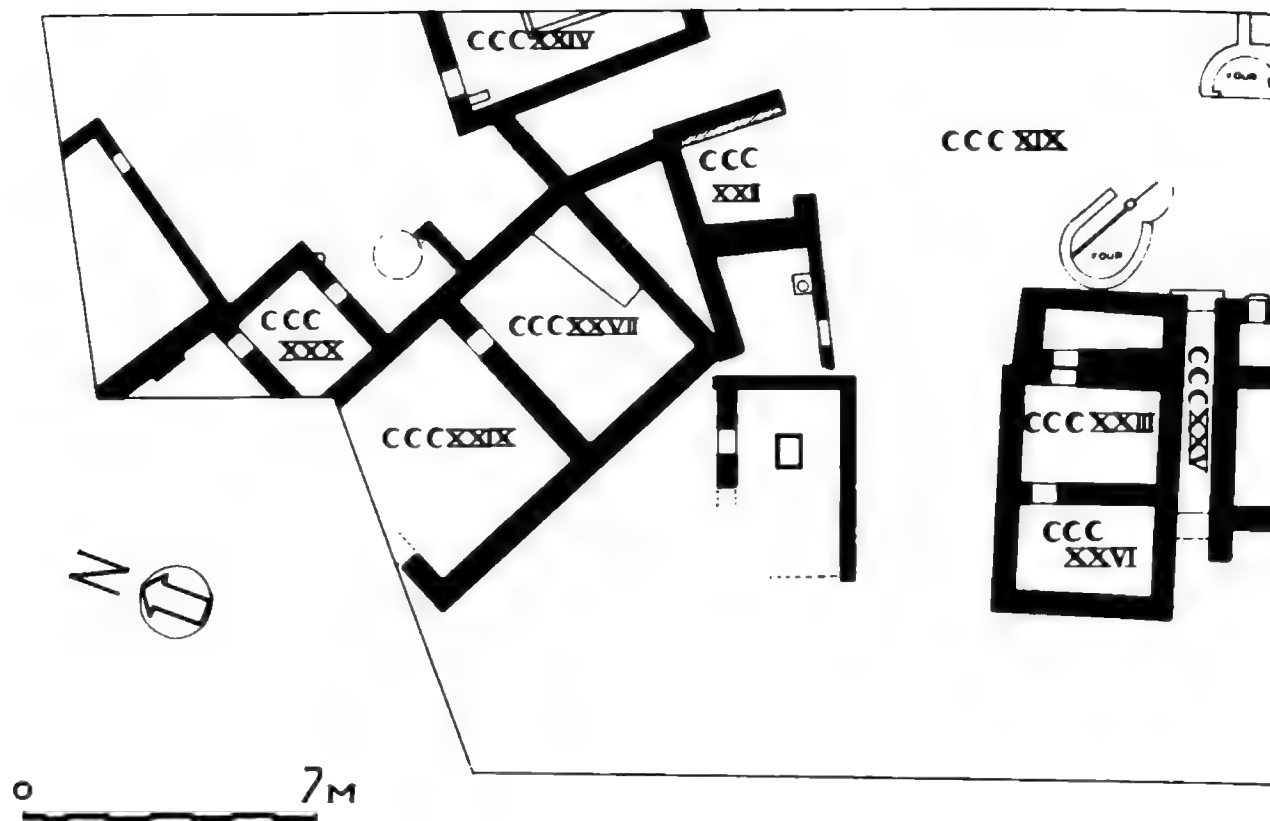


Fig. 3.6(a): Mundigak A, plan of structures, I<sub>1</sub>.

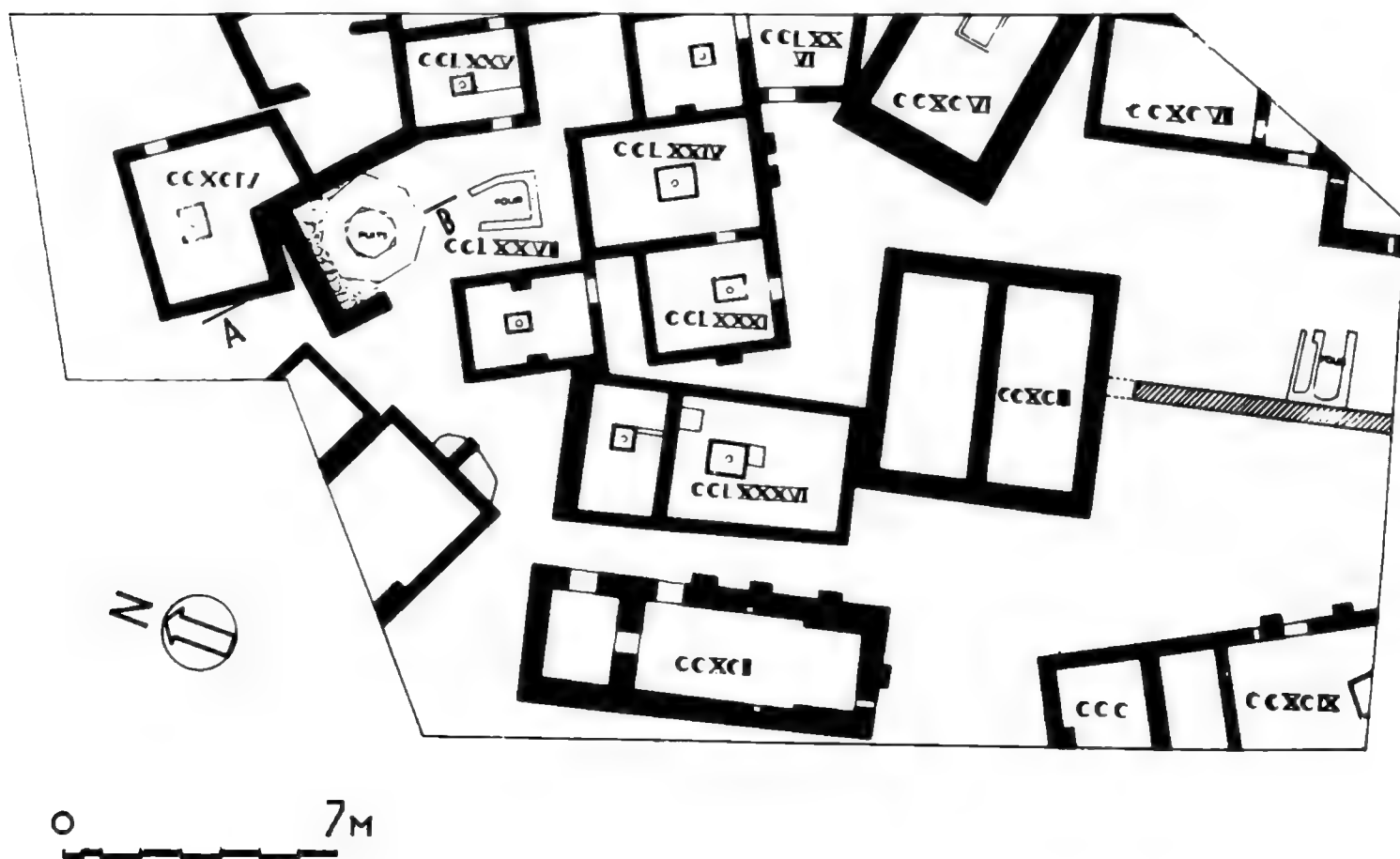


Fig. 3.6(b): Mundigak A, plan of structures, II<sub>2</sub>.

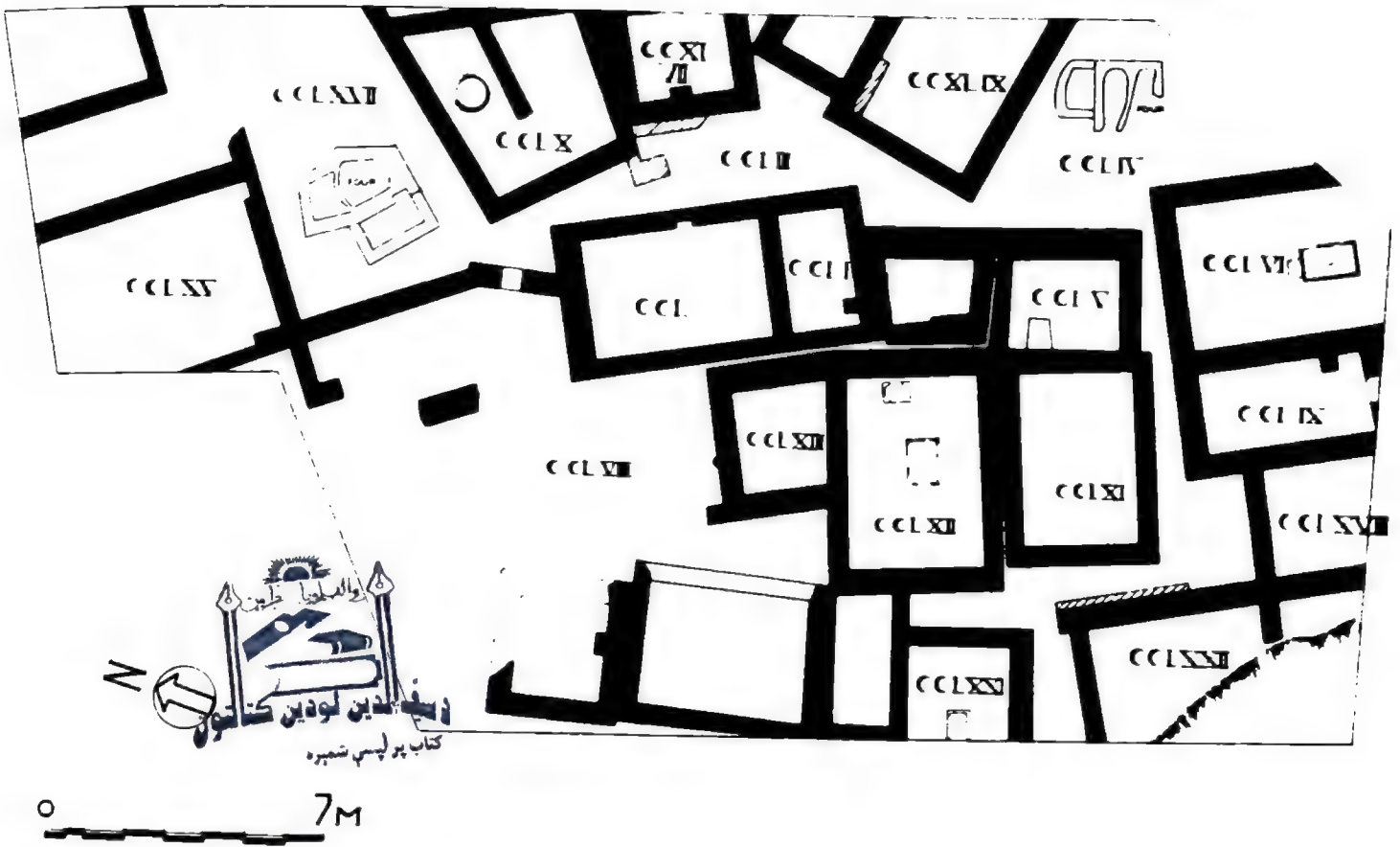


Fig. 3.6(c): Mundigak A, plan of structures, II<sub>4b</sub>.

Of particular interest are the presence of two large mud brick and *pisé* oval or U-shaped ovens in an exterior open area. Analysis of these ovens indicates that extremely high temperatures (600-1100°) were produced in them. Their location in a large open space, exterior but adjacent to habitations, might indicate the beginning of functionally specific areas within the site. From the limited sample it would appear that there is a significant increase of basic structure size with those of Phase 5 being almost three times larger (9 m by 6 m). Phase 5, and therefore Period I, is stratigraphically sealed by a deposit of varying types of debris suggesting that this particular area of the site was not occupied for some time. The type of habitation structures described for Period I<sub>4-5</sub> seem to establish a pattern which, as will be shown, is very consistent until Period IV. It should be noted here that Casal has been criticized for not making a sharper distinction, if not periodization, between Period I<sub>1-3</sub> and I<sub>4-5</sub> (e.g. Fairseris, 1971: 127) because of differences evident in the architecture and ceramics. The ceramics are discussed below but on the architectural evidence, Casal's designation of a single period seems correct. Given the extremely small sample and exposure of Period I<sub>1-3</sub> as compared with I<sub>4-5</sub>, or other periods, it would have been premature to make a major stratigraphic division merely on the basis of the presence or absence of substantial architecture.

Period II is divided into three phases (II<sub>1-3</sub>) the last one of which is subdivided into units a and b (Fig. 3.6b-c). Walls were of mud bricks, founded in deep wall trenches filled with *pisé*, or using wall remnants of previous structures (Period I<sub>5</sub>) as additional reinforcement. Only rectangular structures were identified but unlike Period I they were divided into two rooms,

one smaller than the other (2 m × 4.4 m v. 4/5 m × 6 m), connected by doorways. During Phases 1–2 most rooms had an exterior entrance whereas in Phase 3 only one such entrance was found. Interior and exterior wall buttresses were frequently encountered along with a few examples of small windows and wall niches. A very marked characteristic of this Period was a much greater density in the disposition of structures.

Five structures in Period II<sub>1</sub> continued to have a centrally located interior rectangular hearth set into the floor and constructed of *pisé*. However, these hearths now have a centrally located firepit which will continue to characterize such features throughout the remaining occupations at the site. A single structure was found with an interior rectangular pit constructed with *pisé* and filled with ash and debris which occupied most of the floor area. The existence of such a pit is suggestive of some specialized function for this structure (cooking?). A large open area was interpreted as a possible cattle pen. Finally, another room had a small semicircular *pisé* structure attached to one wall which is referred to as a seed box (?).

The total number of structures increased during Period II<sub>2</sub>, although the large open area remained free of structures. However, it is doubtful that this area was used as an animal pen since it now had a dividing wall and a substantial rectangular oven with two U-shaped chambers. A northern cluster of structures was distinguished by the construction of a well (1 m in diameter by 8 m deep) excavated into virgin soil (Figs 3.6b, 3.8a). The upper part of the well was enclosed by an octagonal mud brick structure c. 1 m high while the well interior was *pisé*-lined. An area which separated the well from nearby structures was lined/paved with stone boulders. Immediately south of the well was a small open space with a centrally located rectangular oven suggesting a possible functional correlation between the two features. Another interesting correlation with these features is that every surrounding structure had an interior hearth which again suggests that this area was functionally distinct.

Period II<sub>3a</sub> underwent a decrease in the number of structures and an increase in the open areas. Only one definite and one possible external entrance were located in Phase 3a and none in 3b. Absence of such entrances led Casal to speculate that structure walls functioned as supports for a wooden superstructure or an upper living structure, but the interior hearths and mud floors might indicate that entrance was via the roof. A factor which has not received adequate attention is that of the frequency and location of interior hearths: in Phase 3a the only room with an interior hearth also is the only one with a possible external entrance. Of the three rooms with hearths in 3b only one can definitely be said to lack an external entrance (and this hearth lacks an internal firepit). On the other hand, the other structures with hearths are incompletely excavated and, therefore, an external entrance cannot be ruled out. Another important point is that only rarely in the subsequent periods are rooms that lack an external entrance found with an internal hearth. Cumulatively these factors suggest that rooms without an external entrance had a non-habitation functional specialization, such as storage, for which an external entrance was not necessary and/or desirable. Another large rectangular mud brick oven with two U-shaped chambers was constructed in an open area during Phase 3a. This oven continued in use through 3b with the addition of a third U-shaped chamber. An additional asymmetrical mud-brick three-chambered oven was constructed in a different open area during 3b. Finally, a unique circular *pisé* basin was constructed inside one 3b structure.



There is no reason to question Casal's stratigraphic designations for Period II. A marked continuity seems to persist for the architectural developments represented in Periods I-II which corresponds to a similar continuity in most categories of material culture. The overall picture is one of continuous rebuilding reflecting internal population growth and shifts within a village settlement pattern. A significant development for Period II, however, is the possible existence of functionally distinct areas and structures within the settlement.

The remains of Period III in general are usually contrasted against those of Period II and depicted as representing a period of "vitality and expansion" as opposed to the "stagnation" of Period II. Although Period III witnessed some significant changes in material culture it also demonstrated a stratigraphical and architectural continuity with Period II. Casal divided Period III into six phases (III<sub>1-6</sub>) with the last phase (III<sub>6</sub>) subdivided into units a, b and c.

Period III mud brick structures are essentially similar to those found in Periods I-II. However, the previously typical structure with one large and one small room becomes extremely rare (one example in III<sub>1</sub> and III<sub>6c</sub>). During Period III an increased density in the number of structures per excavated area was determinable. This increased density is often interpreted as representing population growth but this fails to take into consideration the possibility that all structures were not habitations. Period III<sub>1-5</sub> structures demonstrate various types of rebuildings such as additional walls, interior features, and repairs (Fig. 3.7). Walls are not, however, as firmly founded in III<sub>1-5</sub> as in previous occupations. Throughout Period III several structures are found with common, or closely abutted, walls which might indicate that such structures represent a socio-cultural unit. Open spaces between these structural clusters is very irregular giving the impression that if such socio-cultural units are represented then they took shape rather haphazardly or according to some agglutinative cultural process. Entrance to structures was either by a small lateral doorway or via the roof. It is interesting to note that almost every structure with an interior hearth was provided with a lateral doorway. Structures without such hearths were far more variable in this respect.

The large rectangular multichambered mud brick ovens are identified for the last time in Period III<sub>4</sub>. If these large possibly domed ovens are potter's kilns, as Casal suggests, then their final appearance in this period might be related to two important factors. First, the increased variety and sophistication of the ceramic industry in Period IV combined with the disappearance of "kilns" in habitation areas might represent an intensified industrialization of this item. Second, their disappearance in Period IV might be related to the special functional structures recorded for that period.

A square structure in Period III<sub>1-2</sub> provides information on how roofs were supported. Along one wall at the top were located a series of wall niches in the shape of a stepped triangle with fragments of wooden beams in place. It is possible that the main beams were placed in the lowest step and then sealed in place by the placing of a small beam in the upper step perpendicular to the end of the main beam. Should these niches represent beam supports, then the corresponding functional/room height was less than 1.75 m, hardly enough room to stand. Small windows were recorded throughout Period III, and in one instance a mud brick "shutter" was found in place.

Three wells, or three building phases of a single well, were found in Period III<sub>2</sub> (Fig. 3.7a). Unlike the well of Period II these wells were simple circular pits excavated into virgin





to the tomb itself had been sealed and then another wall constructed in front of that entrance. Only a single ceramic container was found in association with the burial, but outside the tomb were the only examples from Mundigak of bronze axes and a single adze. This tomb is the only one located within a habitation area at Mundigak, and it provides a stratigraphic correlation for burials located on another mound.

Two successive groups of burials were defined on Mound C located below structures of Period IV. The earliest (perhaps earlier than III<sub>6</sub>) consisted of single flexed burials placed in irregularly shaped pits excavated into virgin soil. No diagnostic material was found with these early burials, grave goods being limited to flint tools, a single necklace of cow's teeth, and a single bead bracelet. The later (?) group of burials were placed in tombs similar to that identified in III<sub>6</sub> (Fig. 3.8b). These ossuaries were rectangular and constructed from fired bricks. Puddled clay floors were constructed first and then brick walls were set into them. The predominant form of interment involved multiple burials although a few single burials were found. Skulls were carefully arranged in a row along one of the walls while the remaining skeletal parts were scattered about the interior of the tomb. Only rarely were articulated limbs located. The skulls appear to have been detached by decapitation and then placed *in situ*, while the rest of the body was either mutilated or defleshed in some manner and placed in the tomb at a later date. A single instance of a lamb's remains were found deposited in a like manner in one tomb. Besides a few vessels of decorated ware, isolated pendants, and a few blue and white beads, grave goods were very rare. There was nothing to indicate any differential social status except perhaps the fact of the burial itself. Unfortunately the size of excavations at Mound C were very limited. It is interesting to note, however, that this is the only mound at Mundigak besides Mound A to have materials datable to pre-Period IV. This concentrated location away from Mound A might indicate that the concept of a specially designated area for burying the dead was well developed by this time.

Period III<sub>6b</sub> had only a few structures all of which seemed to centre on a single row of rooms. However, several free-standing walls were found leading off to the north. Some of these structures had been filled-in with fired brick by the building activities of Period IV. Several structures were definable for the last occupation of Period III<sub>6c</sub>, among which was a single example of a rectangular structure divided into a large and small room. This final occupation underwent several modifications and rebuildings which centred on the gradual addition or alteration of open spaces surrounding various blocks of structures. After Period III<sub>6c</sub> there is a pronounced change in the function of the structures built on Mound A. From Period I through III<sub>6c</sub> the general impression has been one of structures and debris associated with multipurpose activities necessitated by a sedentary agricultural way of life. After Period III, however, a very different picture emerges.

On Mound A the Period III<sub>6</sub> structures were levelled to provide a surface for the construction of a building which marks a significant variation from previous architectural traditions. Its style could indicate that it is associated with a particular social segment or function. Equally important during Period IV was the occupation of new areas at the site, and the construction of special function structures. These newly occupied areas included Mounds B, D, E, F, G, H, and I (Fig. 3.5). Unfortunately it is precisely these structures of Period IV which were heavily devastated by later erosion at the site, but fortunately many were





Fig. 3.8(a): Mundigak, Mound A, II, northern part of excavated area level II, showing well at centre.



3.8(b): Mundigak, Mound C, cemetery, ossuary C.27.



constructed with fired rather than mud brick, otherwise they would have completely disappeared. Another problem is the absence of connecting stratigraphic trenches between major structures, preventing definite associations from being made; Casal established contemporaneity between structures on the basis of associated ceramics, and Period IV was divided into three major phases (IV<sub>1-3</sub>) the first of which is by far the most impressive and without parallel in prehistoric Afghanistan.

Period IV<sub>1</sub>, Casal's "Epoch of the Palace", was characterized by the construction of large monumental structures and enclosing walls (Figs. 3.9–3.13). The "Palace" was a large monumental building with half colonnades located on Mound A which underwent several rebuilding phases. There is little evidence to definitely indicate that this structure represents a "palace", but there can be no doubt that it was "monumental", significantly different from previous and contemporary structures, and culturally important. However, to designate it as a "palace" implies a degree and level of political organization which cannot be presently established.

This important structure was located at the highest point of the site—Mound A. When this building was constructed Mound A must have been an imposing edifice with its 11 metres of elevation resulting from previous occupations and its surrounding(?) terrace wall which was constructed in Period III. From the top of the mound it was possible to see not only the other structures at the site but also the surrounding countryside. The initial structure plan underwent at least three rebuildings of which only the last was a significant alteration. Until the last rebuilding the area north of the colonnaded wall was kept free of other structures so that this building was equally visible in areas away from the mound. Although only the northern wall with its east-west colonnades remains (Figs 3.9, 3.13b) it is possible that such colonnades existed on all building faces. Similarly the only remaining entrance was through the north wall, but it is impossible to rule out the existence of others. The structure's exterior walls appear to be aligned with the cardinal points of the compass, but such is not the case for interior walls. A similar alignment can be defined for other monumental structures of Period IV except for one portion of a large enclosing wall which goes off at a slight northeast angle. This building orientation results in Casal's "Palace" and "Temple" structures being located in the same east-west line which is parallel to one formed by the enclosing walls. It is doubtful that such alignment was the result of chance.

The primary focus of construction appears to have been the large exterior walls faced with partial colonnades of which only the north wall remains. The colonnades, like the wall, were constructed with fired brick; however, the colonnades' exterior was plastered, painted white and topped with a brick frieze of opposing stepped triangles (Fig. 3.9a). The wall remnant was 2.3 m high and originally was taller. North of the wall was a broad brick walkway. South of the wall, and sometimes attached to the wall, were several small rectangular habitation (?) structures similar to those described for earlier periods. Access to these structures was either through a stepped entrance that opened onto a large "courtyard" or through another entrance that led directly into one of these small interior rooms. These interior habitations were not significantly different from those found in III<sub>6</sub>, and except for the organization imposed on them by the colonnaded wall and "courtyard", they were haphazardly arranged. The first two rebuildings (IV<sub>1a-b</sub>) are almost exclusively concerned with these interior

structures. Successive rebuildings resulted primarily in a proliferation in the number of rooms and a thickening of walls (Fig. 3.10a). The north end of the large courtyard becomes divided into a series of rooms distinguished by the construction of two substantial walls perpendicular to the colonnaded wall. These new structures continue to reflect habitation activities indicated by the presence of interior ovens, drains, wall-lamp niches, and at least one kitchen area. In contrast the third rebuilding, IV<sub>1c</sub>, represents significant architectural and, possibly, functional changes for this complex of structures.

During Period IV<sub>1c</sub> major new structures are constructed north of the colonnaded wall. These elongated rectangular structures would have completely obscured the colonnaded wall from view at the time of their habitation. Moreover, structures on both sides of the colonnaded wall no longer appear concerned with habitation activities. These new structures are generally lacking the interior features which characterized the previous ones, and in one instance a room contained an unusual quantity of alabaster bowls and bronze points. Stairways located in some structures indicate the presence of an upper storey, or at least reflect the importance of having access to or from the roof. The previous colonnaded wall continued to be used but many of the structures south of it were filled with fired brick in the construction of a large platform which was made accessible by a series of stairways added onto the old entrance. Five metres behind and parallel to the old wall a new colonnaded wall was built. The construction of a new and taller colonnaded wall must have added significantly to the overall terraced effect of Mound A. The platform had received several coatings of white and/or red plaster. A wall trench had been excavated for the foundation of this new wall (it cut through IV<sub>2a-b</sub>) and then filled with large stones after construction of the wall. Structures located south of this new wall were no longer haphazardly arranged but were organized along a grid pattern with varying sized rooms (Fig. 3.10a). These rooms were extremely small and void of any internal features. Wall remnants indicate that the walls were never very high and it is doubtful that they were used as habitations. The floors of these units had been very carefully filled and levelled. Unfortunately this last rebuilding was heavily eroded making it difficult to assemble an overall plan.

West of Mound A, Mounds B and D produced remains of an enclosing wall complete with "bastions" (Figs 3.10b, 3.11a, b). These structures were erected directly on virgin soil and consisted of two thick parallel walls of fired brick resting on foundations of stone and clay. Regularly spaced buttresses characterized the exterior wall while the interior separating the two walls was divided into small rooms which may have been habitations. The floors of these rooms had been raised significantly above the level of the exterior living surfaces. The frequency of stairways associated with these rooms indicate that access to either the roof or an upper story was of some importance. Two completely separate examples of such enclosing walls were defined west of Mound A. The nearest, and most extensively excavated example, is about 100 m away while second example was 150 m away parallel to the first. Both examples were constructed from north-south and were orientated in the same cardinal directions as were the walls of the "palace" and the terrace walls of Mound A. The wall nearest Mound A was located on a natural elevation significantly higher than the second wall which would have contributed greatly to the overall terraced, or stepped, profile that the entire settlement was now assuming.

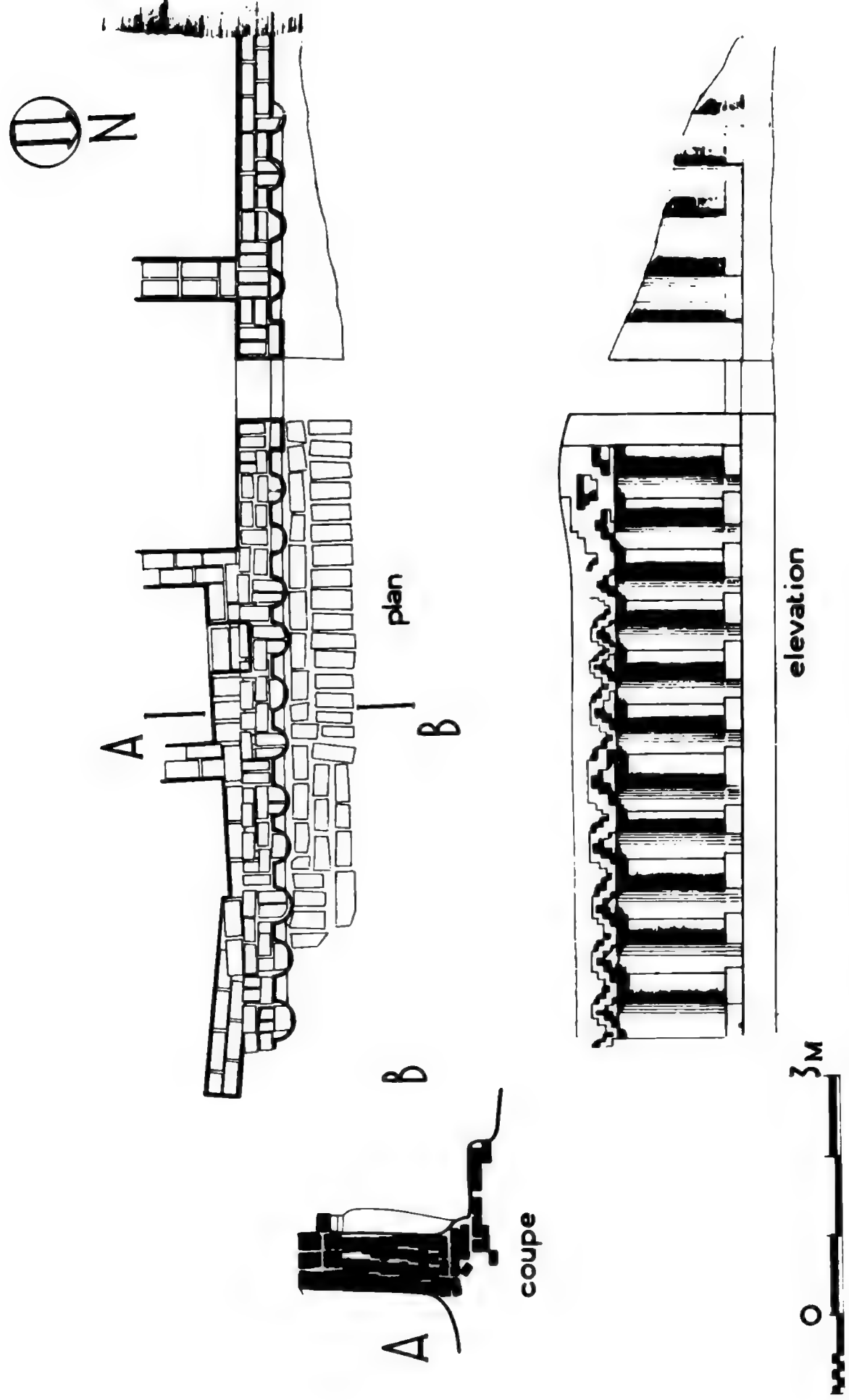
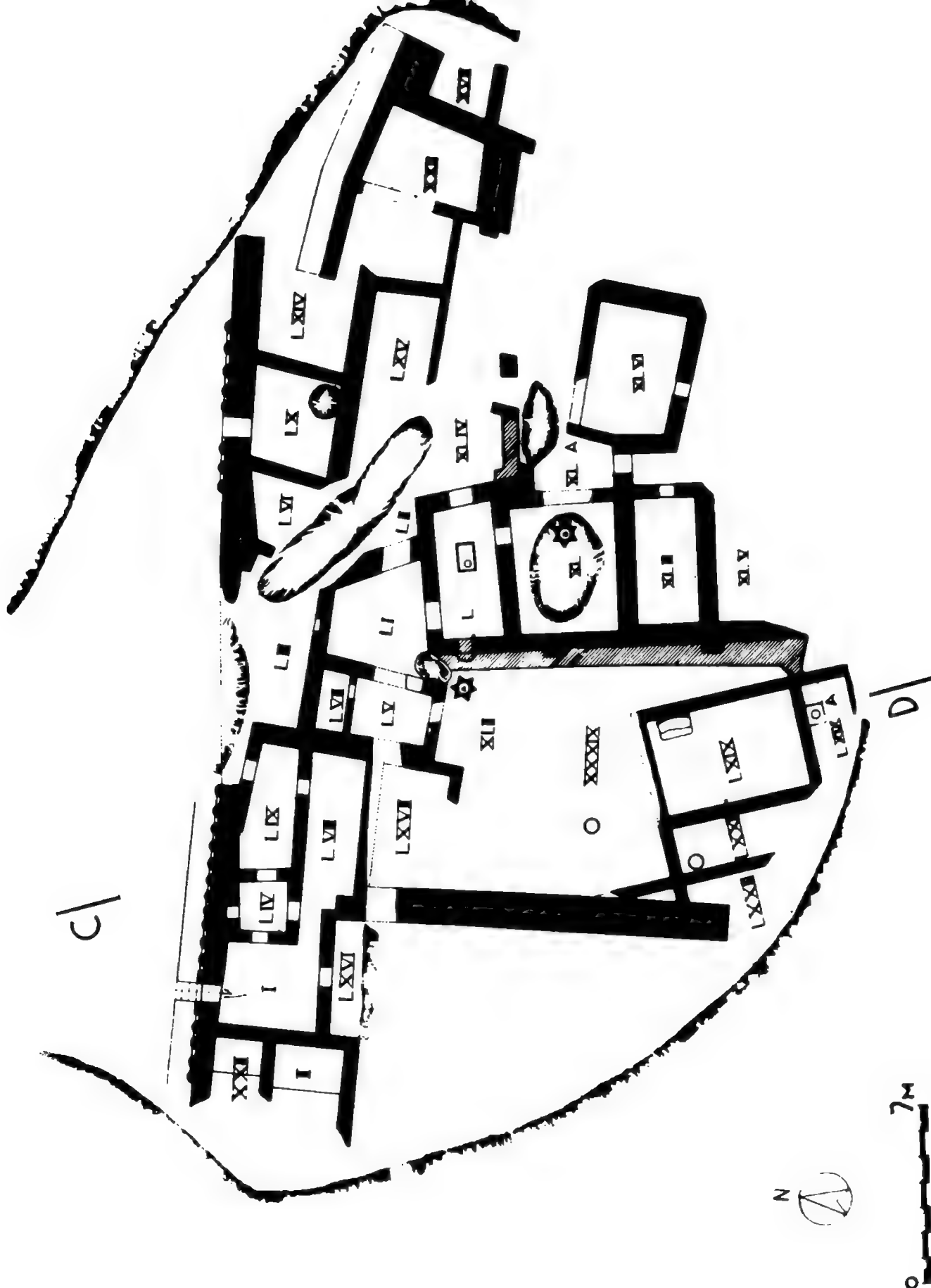


Fig. 3.9(a): Mundigak A, Plan and elevation of colonnade west of palace, IV<sub>1</sub>.





The south end of the nearest west enclosing walls corners at a right angle with an identically constructed wall which is orientated west-east. A similar situation was defined at the north end of the same west wall except that there the west-east wall cornered at a slightly obtuse angle to the north-east. The easternmost extent of these walls is unknown, but it is



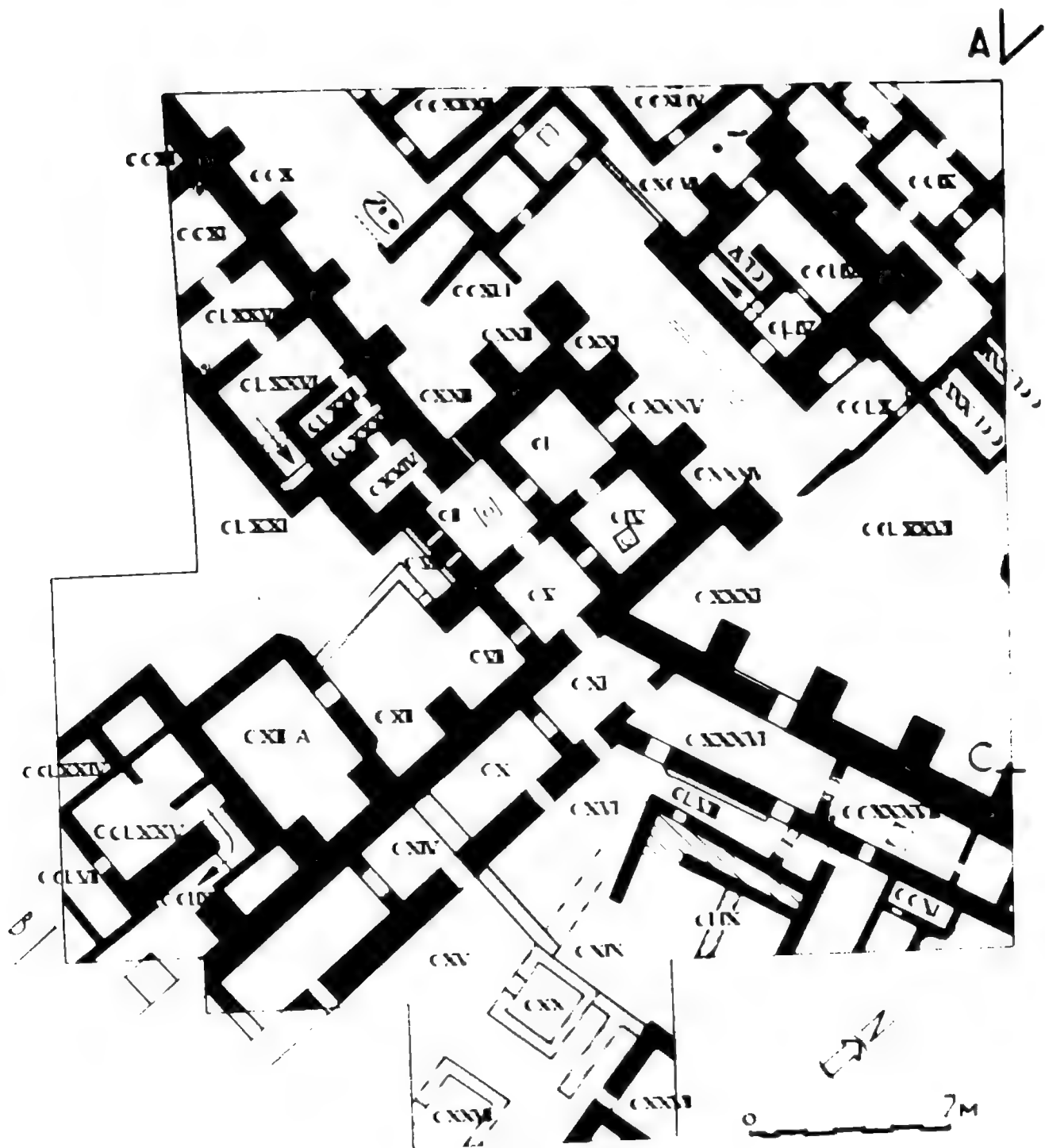


Fig. 3.10(b): Mundigak B. Angle of rampart and contemporary structures. IV

reasonably certain that they incorporated at least Mound A and possibly Mound G, with its "temple" structure (Figs. 3.11b, 3.13b), within their perimeters. At both corners were bastion-like structures constructed in the same architectural style as the walls. The south bastion was a simple rectangular room with exterior buttresses whereas the northern bastion was divided into four inner rooms, and was possibly two stories high. Similar bastion-like structures were located 2 m to the east along the exterior face of both east walls. A similar, but completely separate, bastion-like structure was found north of the northwest corner bastion. Abutting against this bastion was another perpendicular

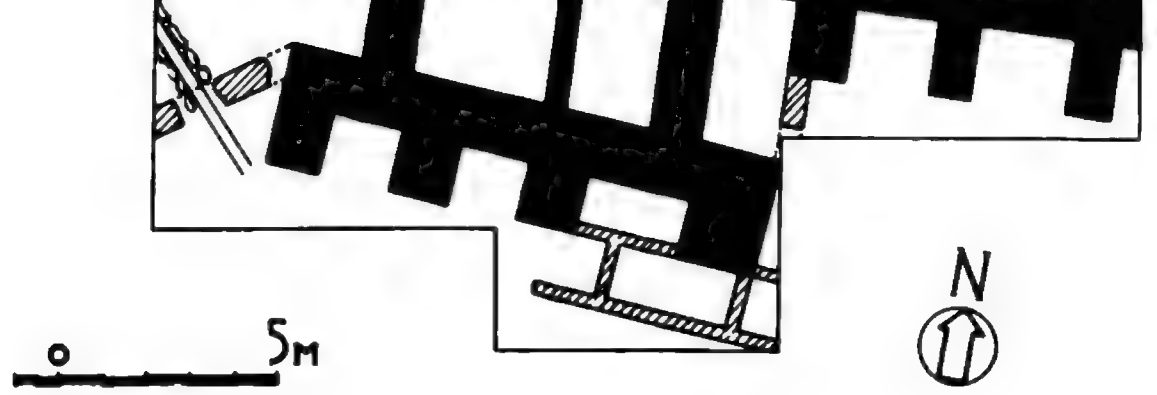
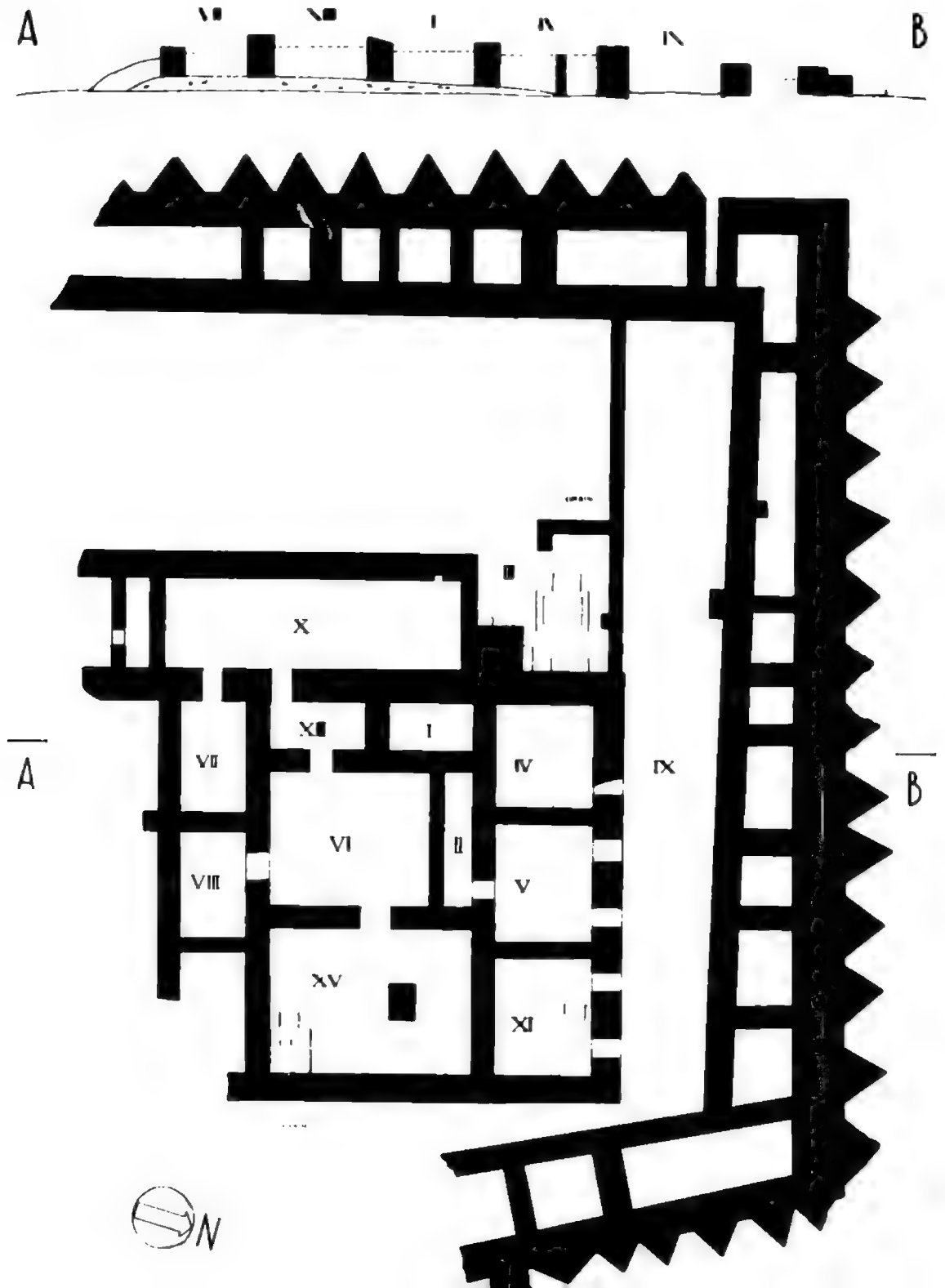


Fig. 3.11(a): Mundigak D, Bastion and adjacent structures, IV<sub>1</sub>.



enclosing wall which presumably extends westward until it joins the most western north-south wall.

Excavations in areas adjacent to these walls and bastions disclosed a myriad of the more typical house-like structures. There was no apparent organization to these structures other than that dictated by the proximity of the large walls. These structures were characterized by numerous habitation type features such as interior hearths. In the area of the northwest corner bastions several different styles of ovens (oval, circular, rectangular, single and multichambered) were found suggesting that this might have been an industrial area. In the same area were also several examples of drains. The limited excavations on Mound C, between Mounds A and B, suggest that the area enclosed by these large walls was densely occupied.

East of Mound A is Mound G and excavations here revealed a large monumental structure referred to by Casal as a "temple" (Figs 3.11b, 3.13b). This structure had an orientation parallel to that of the "palace" and was in a direct west-east line with it. The structure was built mostly on virgin soil and in a technique similar to that of the enclosing walls. Unfortunately the southern part of this structure was heavily eroded, but there is no reason to believe that it differed significantly from that which was excavated. Two massive parallel external walls formed the structure's perimeter. The internal area between these walls was divided into small rooms which were not used for habitation. Massive triangular partial colonnades were constructed from fired brick along the external face of the perimeter walls. Only one construction phase could be determined, and it, like the last rebuilding phase of the "palace" demonstrates a high degree of organization. No entrance was located, but it might have been in the eroded south wall. A large rectangular structure with its eastern two-thirds divided into small rooms dominates the centre of the "temple". The western part of this building consists of a large open area or courtyard. Centrally located at the north end of this courtyard was a large basin considerably elevated above the surrounding living surface. The immediate area was ash covered and located directly behind the basin was a ceramic drain which extended east-west between the main wall and smaller L-shaped wall associated with the interior building. This smaller wall formed the western boundary of a little chamber interpreted as representing a shrine complex. In the southeast corner was a large square rectangular masonry structure with white plastered benches. A similar bench was found along the east wall. In the centre of the chamber was a large rectangular hearth painted red with a small step on the west side. The rooms to the east were of various sizes and a few of them had interior hearths and other small features. Although there is nothing to indicate that this was a religious structure it certainly was not a habitation either. Whatever the function it presents an interesting contrast to the rest of the site.

Period IV<sub>1</sub> demonstrates both continuity and change with the preceding Periods at Mundigak. Perhaps the most distinctive change was in the appearance of special function architecture (Figs 3.12, 3.13). Exactly what this difference means in terms of overall cultural development remains to be determined. Casal maintains that the Period IV<sub>1</sub> occupation met with a violent end resulting in partial abandonment of the site. The scattered examples of burned buildings and other evidence cited by Casal as indicating a general conflagration, however, are not convincing, although the "palace" and "temple" do appear to have fallen



**Fig. 3.12:** Mundigak A, General view of palace, Period IV<sub>1</sub>.

into disuse and did not regain prominence again during Period IV. Contrastingly, several of the structures associated with the enclosing walls appear to have been continuously inhabited throughout the entire period. Indeed, given the problems created by large amounts of erosion and the lack of adequate stratigraphic data, the three-phase division of this period can be challenged. Until additional excavations are made, the divisions will remain problematic.

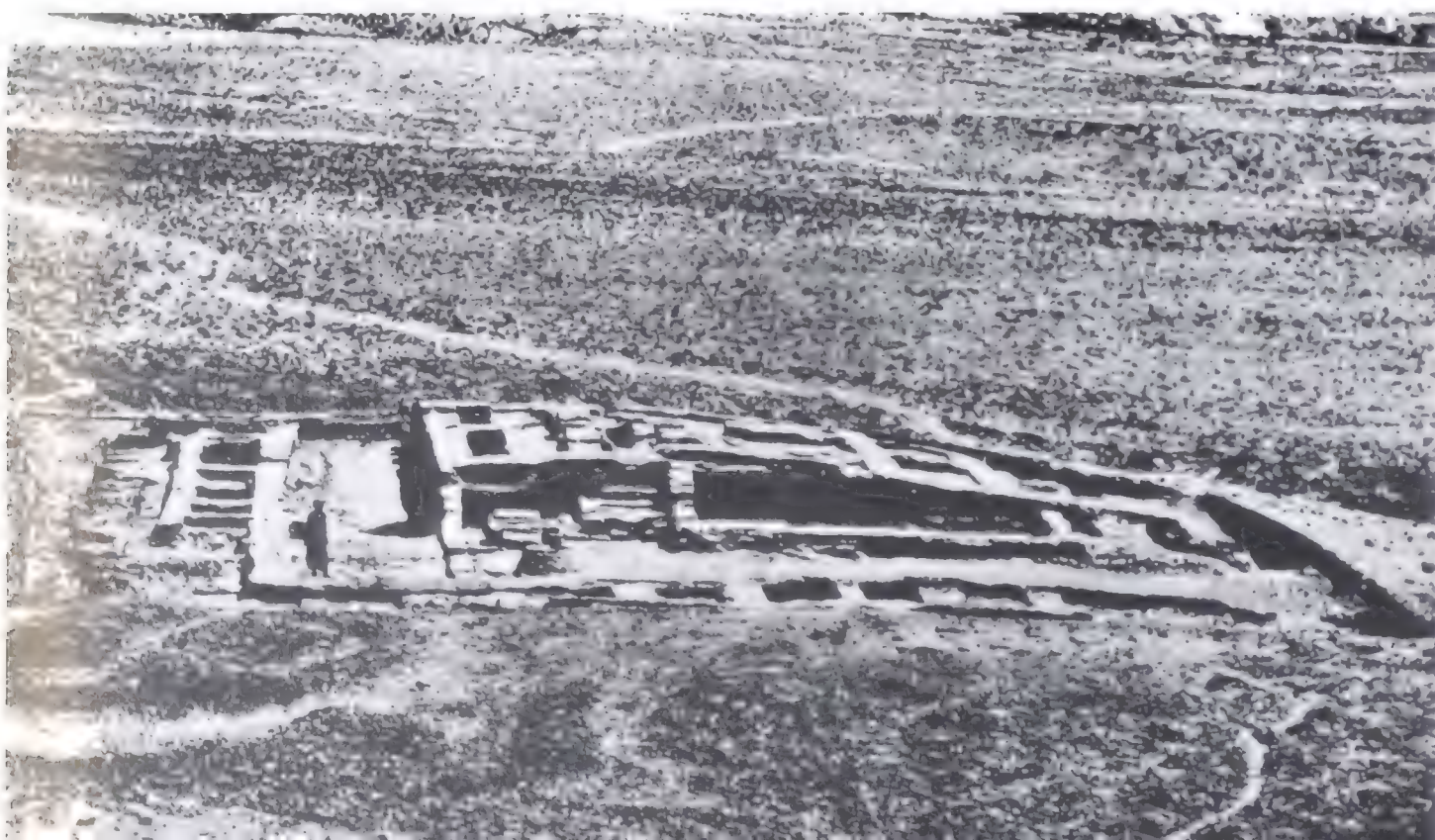
Wherever Period IV<sub>2</sub> was found (mainly Mound B) it was of shallow depth and the structures demonstrated continuous occupation from IV<sub>1</sub>. The few new structures which were located continued to utilize old walls including those of the enclosing walls. Foundations when present were slight and the basic preparation was a simple levelling of the soil. Small sondages away from the enclosing walls indicated that there was some expansion into previously uninhabited areas. The ceramics show a continuation of previous motifs and vessel forms with some changes and alterations, and metal artifacts demonstrate a marked frequency increase. This phase seems to be distinguishable more on the basis of ceramics than on stratigraphic data. Casal proposes that the end of IV<sub>2</sub> was caused by a possible earthquake with the site being abandoned for a short period. Such an earthquake could also account for the evidence of destruction noted at the end of Period IV<sub>1</sub>.

Period IV<sub>3</sub> is also known mainly from Mound B. Known structures are concentrated around previous walls, but a new enclosing wall is constructed parallel and a little north of the older ones. The new wall has three major parallel walls. The two exterior ones have a small rubble-filled core thereby forming a single massive wall. As in the previous phases, the remaining interior space was divided into small rooms used for habitation. Interior stairways again indicate that access to an upper storey or the roof was an important aspect of these dwellings. North of the wall is a large open space of unknown function. Most structures are





Fig. 3.13(a): Mundigak A, The palace, west colonnade, IV<sub>1</sub>.





described as being much more carelessly constructed when compared with the preceding ones but otherwise very similar. Again the major distinction for this phase is to be found in the ceramic artifacts and the disappearance of previous forms and motifs (most notably animal motifs). Structures from this phase have been located on other mounds but these are usually shallow and highly eroded. The single piece of stone sculpture was found in the upper 15 cm of deposits attributable to Period IV<sub>3</sub>. This final phase of Period IV did not come to any violent end, and the difference between it and Period V again seems based mainly upon ceramic traits and the reoccupation of Mound A by another monumental structure.

Up to this point the Mundigak sequence has basically demonstrated a record of continuous cultural development, albeit beset with sampling and stratigraphic problems. However, Period V presents many important problems of interpretation affecting the later prehistory of Afghanistan while at the same time offering no hints as to their solution. Almost all charts and discussions of prehistoric cultural development in Afghanistan terminate with the end of Period IV<sub>3</sub> (e.g. Dales, 1965, 1973: 160) although the sequence continues for three more major periods. The interpretation that a major abandonment occurred after Period IV<sub>3</sub> has been reinforced by the excavations at Said Qala, Deh Morasi, Shahr-i Sokhta and the Quetta valley which failed to define a sequel to Mundigak IV type material. Moreover, this hiatus in cultural development seems to be contemporary with the development of the Mature Harappan culture in the Indus valley. The apparent absence of any interaction between the Harappan and later prehistoric cultures in Afghanistan is surprising since such contact had been noted for eastern Iran (Lamberg-Karlovsky and Tosi, 1973) and Soviet Central Asia (Masson and Sarianidi, 1972: 124–8). Throughout Mundigak III–IV there was evidence of some cultural interaction with the Indus valley, and to further complicate the situation there is a pronounced dissimilarity between the material culture of Mundigak IV and V or, for that matter, between V and any other prehistoric culture yet defined in the area. Therefore, the culture sequence at Mundigak following Period IV is extremely problematical.

No doubt many of the interpretative problems can be attributed to the heavy erosion witnessed by the upper levels of the site in conjunction with what appears to be disturbed stratigraphy (Casal refers to the possibility of earthquakes, a not uncommon phenomenon in this area). Mound A was reoccupied and utilized for the construction of a large monumental building directly atop remains of Period IV<sub>1c</sub> (Fig. 3.14). Construction involved the use of fired bricks placed atop a stone foundation. Previous structures were filled in with debris or covered with brick to form a level surface. The old colonnaded structures were completely covered with bricks in the construction of a large massive platform on the northern part of the mound. On the top of this platform were two small rooms occupying the highest elevation at the site. Directly south of these rooms, and at a lower elevation, were two long and narrow rectangular rooms encompassing almost the entire east-west distance of the mound's summit. South of these rooms was another series of small rectangular rooms which could be divided into two groups: small rooms on the west and slightly larger rooms on the east. Indeed, the plan for this southern sector is strikingly similar to that of the last rebuilding in IV<sub>1c</sub>. The immediate summit area of the mound was terraced and it appears that the perimeter of this whole building complex was defined by these terrace walls. Unfortunately these upper levels are very heavily eroded preventing a full structural plan from being delineated. There can be

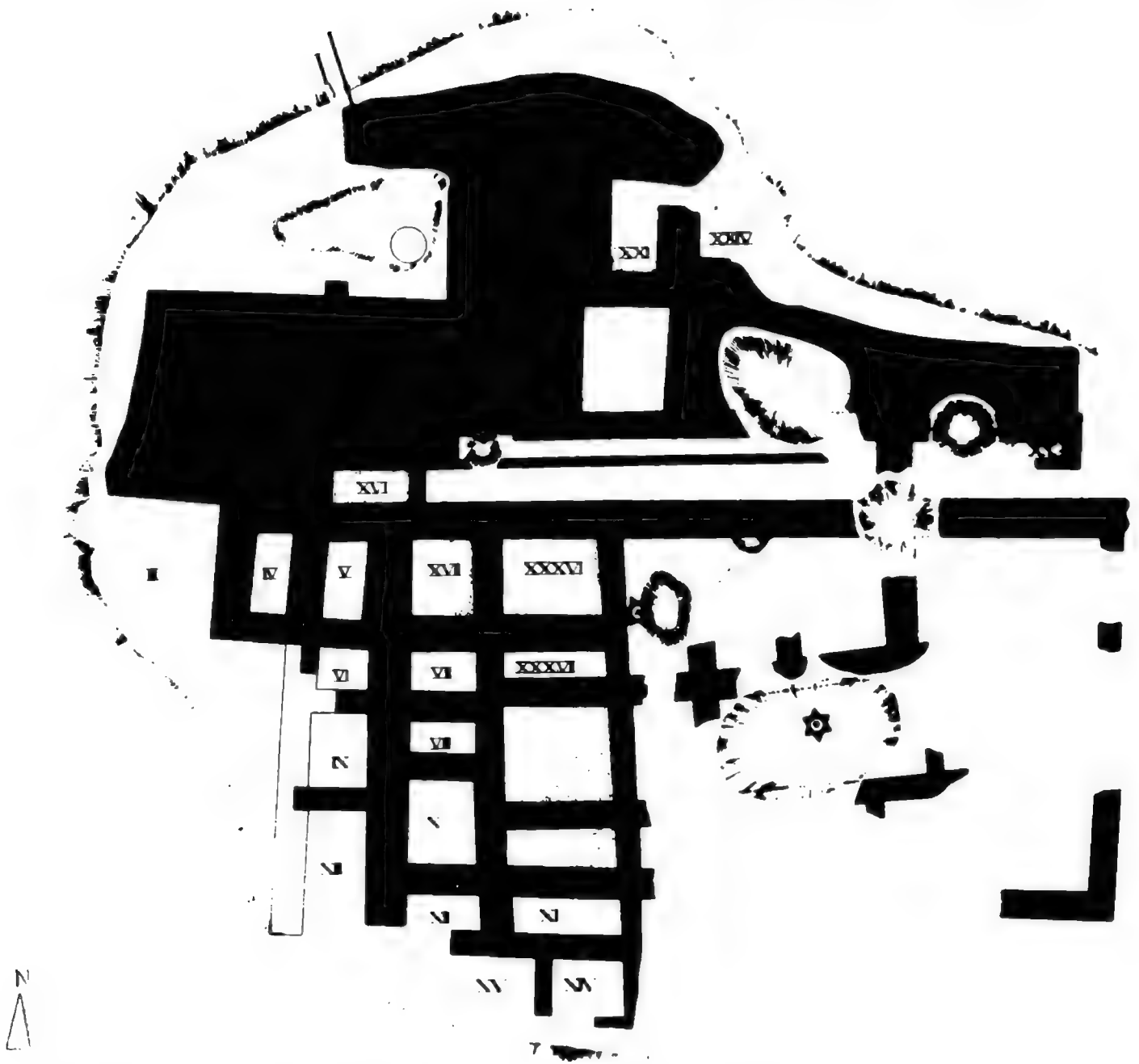


Fig. 3.14: Mundigak A, Plan of the "massive monument", Period V<sub>1</sub>.

no doubt that the elevated position of the whole structure, the terracing, the massive platform with elevated rooms atop it, and the fact that it was painted red and/or white made for a very impressive building.

The function of this massive monument is unknown, but it is reasonably certain that it was not a habitation. It was completely devoid of the usual habitation features such as interior rooms. Furthermore, there is no indication that these rooms possessed any sort of roof structure. The only indication as to the possible purpose of this structure was the location of a human "sacrifice" just outside the foundation of the surrounding terrace. Found in association with the terrace wall foundation were several human bones including that of an infant's jaw bone. The human "sacrifice", combined with the stepped-pyramidal shape created by the terrace walls and the massiveness of the structure itself is certainly suggestive,

as Casal noted, of the Mesopotamian "ziggurats". However, the exact function of this interesting building remains to be determined.

Although the monumental structure was the only extensive area from this period excavated, it was not the only structure associated with Period V. Casal maintains that a whole series of habitations are to be found to the east side of Mound A and extending eastwards to the river, and there appear to be dwellings in areas immediately outside the terrace walls. It should also be noted that the main structure itself underwent at least one rebuilding.

Architecturally and stratigraphically, there is no greater difference between Periods V and IV than there was between IV and III. The major distinction between IV and V is to be found in the ceramics. The only comparable ceramic industry is geographically distant and chronologically late. It appears that it was upon these ceramic comparisons that Casal based his contentions that a period of abandonment separated Periods IV and V. If Period V followed IV within a reasonable amount of time, it might have been contemporary with the Harappan culture. Yet, there is nothing associated with this period to indicate either cultural contact or chronological contemporarity. In terms of chronology, however, there is nothing to indicate that Period V was *not* contemporary either. The stratigraphic and cultural relationships of Period V remain extremely problematical.

Although there are some continuities between Periods V and VI the latter is not included in this discussion of prehistoric Afghanistan. The presence of an iron technology and the associated cultural-ceramic affiliations indicate a late chronology for this period: Mundigak VI falls within the chronological range of written records and therefore, technically speaking, is not part of the prehistoric period in Afghanistan.

## Chronology

Information on the absolute chronology of the Mundigak sequence is far from satisfactory. At the time of excavation Casal (1961: 258) obtained a series of C-14 determinations for Periods I and III. Subsequently, however, most of these dates have been disregarded because of their method of collection, possible contamination and their results aberrant from comparative data. Dales (1973: 168) has recently processed some wood charcoal collected from Period I strata at Mundigak and thereby provides the first accurate chronological parameters for the initial occupation. The following are the new dates corrected for the MASCA factor (see Fig. 3.3): Period I<sub>2</sub>, = 3745 B.C.; Period I<sub>5</sub> = 3375 B.C.; and, Period II<sub>1</sub> or I<sub>5</sub> = 3635 B.C. These dates indicate that the initial occupation of Mundigak (Period I<sub>1-5</sub>) occurred between the beginning and the middle of the fourth millennium B.C. (4000–3500 B.C.).

No new chronological information has been gathered for Period II except for the one possible date noted above. However, some appreciation of the chronology of Period II can be obtained by examining the calibrated date for Period III<sub>5</sub> (Dales, 1973: 159). Casal's original series of dates for Period III are contradictory of the stratigraphy; thus, a date from III<sub>1</sub> is a millennium later than one from III<sub>5</sub>. Approximating a date for Period III Dales (1973: 159) has disregarded the obviously aberrant later determinations from this period, and adjusted Casal's

dates for the new half-life and MASCA correction factors. By so doing Dales obtained a dating of between 3100 and 2700 B.C. for Mundigak III<sub>5</sub>. Even so, Dales thinks that these dates are too late (1973: 165). Matters have not been helped by the single published date for Period IV type material from Deh Morasi (Dales, 1973: 159) of 3200 B.C. The three carbon dates from Said Qala are even more confusing. On the basis of ceramic comparisons Said Qala is similar to Mundigak III and perhaps early IV<sub>1</sub>. However, three C-14 determinations from different strata gave the following corrected dates: 2110 B.C., 2160 B.C., and 2230 B.C., indicating how tentative any assessment of the absolute dating for the Mundigak sequence is. However, the following chronology is based on the C-14 dates and comparative material from outside Afghanistan, which will be presented later.

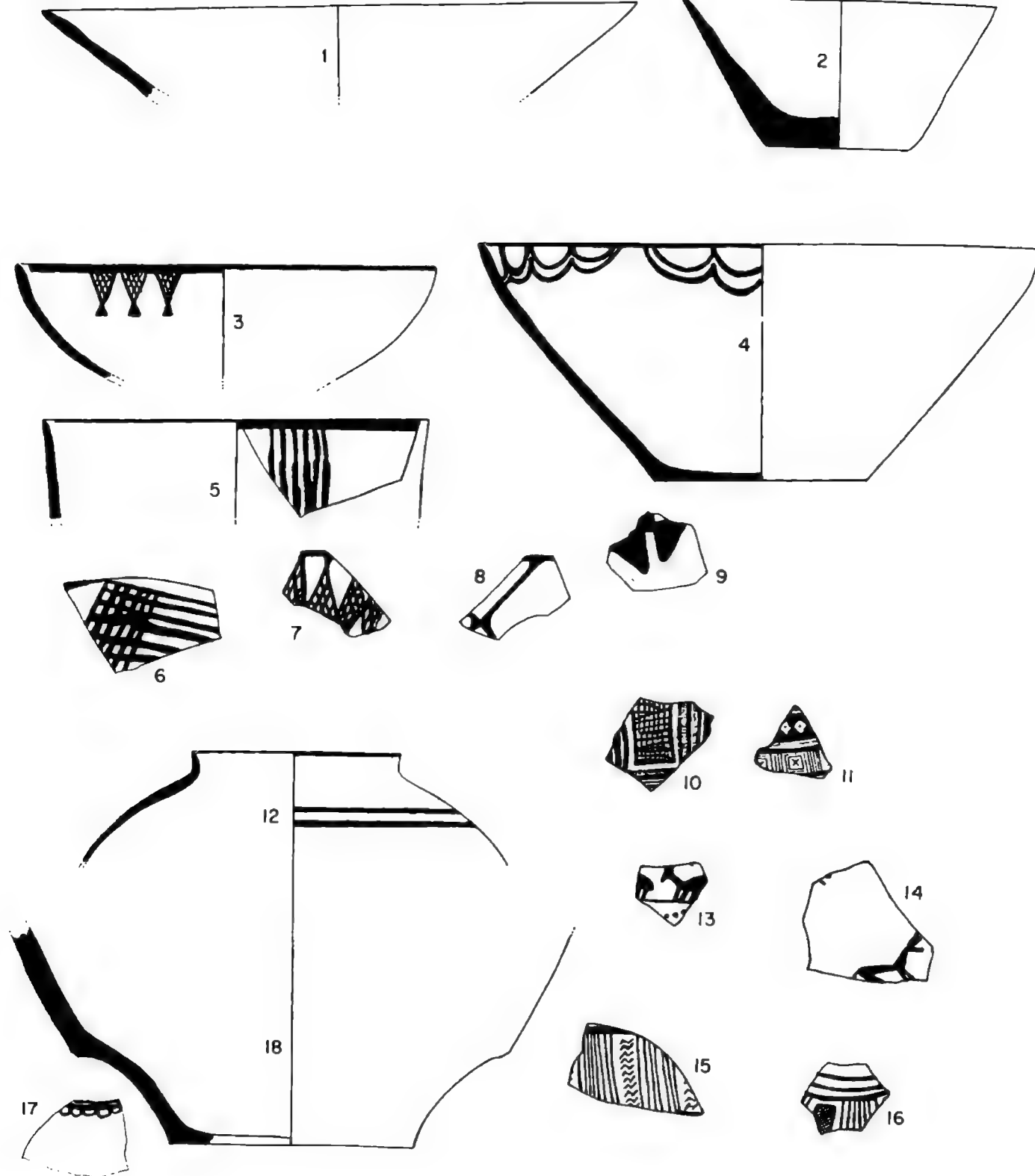
Period II probably represents a rather short occupation at the site which occurred about the middle of the fourth millennium B.C. (3500 B.C.) and lasted for one or two hundred years at most. Mundigak III would date no earlier than the mid-fourth millennium B.C. and persisted through the first few centuries of the third millennium B.C. (3500–2800 B.C.). Late Mundigak III<sub>6</sub> and IV might have encompassed the entire third millennium B.C. (3000–2000 B.C.). The extremely problematical Mundigak V would then date to the first half of the second millennium B.C., (2000–1500 B.C.). Problems of this chronology are discussed later in this chapter.

## *Ceramics*

Perhaps no other aspect of the material found at Mundigak has received as much attention as the ceramics. Several summary discussions have appeared since the original report (Dales, 1965; Mughal, 1970; Fairervis, 1971) and all have highlighted the fact that the ceramics from the Mundigak sequence are very perplexing. Part of this perplexity is related to how the ceramics (and other types of artifacts as well) were collected, analysed and reported. Many of the problems surrounding the interpretation of the artifacts stem from a lack of quantification, and an emphasis upon only diagnostic or complete artifacts. Even so the material from Mundigak stands as the primary reference point for understanding Afghan prehistory, and this is especially so for the ceramics.

One of the basic problems centres on the relationship between Period I<sub>1-3</sub> and I<sub>4-5</sub>, and whether the latter should be a more clearly distinguished stratigraphic-cultural unit. The pottery (Fig. 3.15) is a buff-red ware predominantly wheelmade (90%<sub>0</sub>) with small quantities of handmade (10%<sub>0</sub>) varieties; however, by I<sub>5</sub> wheelmade pottery had decreased significantly in frequency (80%<sub>0</sub>; I<sub>4</sub> = 70%<sub>0</sub>). Vessel forms are limited to straight-angular or curved wall bowls in I<sub>2-3</sub>, and only straight-sided vessels in I<sub>4-5</sub>. In Period I<sub>4-5</sub> collared globular jars appear for the first time.

Unfortunately Casal devotes little attention to undecorated pottery, so discussion must centre on decorated pottery which, in prehistoric periods, generally constitutes a quantitative minority. The basic decorative pattern for Period I involved the execution of black geometric motifs on a red background with a few rare exceptions. Important geometric motifs include carelessly drawn vertical or overlapping diagonal lines, and more carefully drawn: (1) triangles with interior cross-hatching with triangular or circular dotted tips; (2)



**Fig. 3.15:** Mundigak, pottery from Period I: (1-2) handmade pottery; (3-9) wheelmade decorated pottery; (10-11) bichrome sherds; (12, 17, 18) Kot Dijian style sherds; (13-14) sherds of "Togau" style; (15-16) possible intrusive sherds.

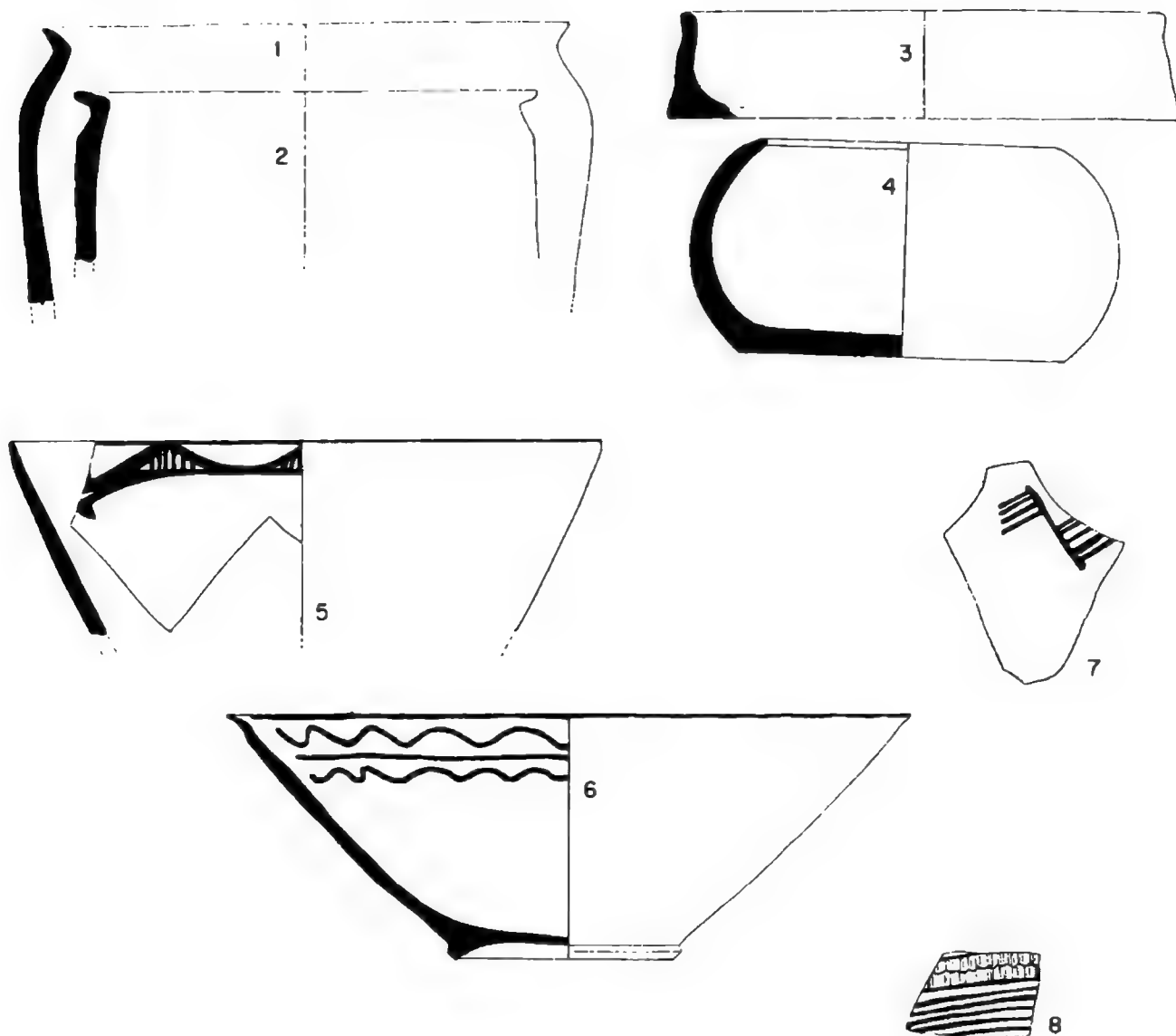


vertical lines; (3) large festoons; and (4) a zigzag pattern with interior cross-hatching. From these major motifs only the triangular (1) and a modified festoon (3) persist into  $I_{4-5}$  and provide continuity for the entire period ( $I_{2-5}$ ).

Two very problematic sherds (Fig. 3.15, nos 13–14) are identified for Period  $I_1$  (Casal, 1961: 170, Fig. 49 parts 11, 12). These are buff paste sherds with animal (caprid) motifs. One has a full-bodied caprid facing left which had been consistently identified as a stratified example of ‘‘Togau A’’ pottery, a type identified in central Baluchistan at Siah and Anjira (De Cardi, 1965). Identification of animal motifs in this early phase has caused considerable comparative problems (Mughal, 1970: 301) in assessing the Mundigak materials, and the correlation of Mundigak I with Anjira-Siah I–II (Dales, 1965: 262). However, Mughal (1970: 282–7) and Meadow (1973: 191) have seriously questioned the validity of the Togau sequence at the type sites. Furthermore, these sherds have assumed an importance out of all proportion in relation to their context at Mundigak. These sherds will not be ascribed their usual importance here because: (1) they are unique examples (two sherds); (2) they are made from a distinct buff paste in an otherwise buff-red paste ceramic assemblage; and, (3) they come from a stratigraphic unit which received only limited testing and which might have been mixed with other units.

It has been argued (e.g. Fairservis, 1971: 127) that Period  $I_{4-5}$  is ceramically different and therefore stratigraphically distinct from  $I_{2-3}$ . This distinction is based upon initial appearance of jar and cup(?) forms and a distinctively different design repertoire incorporating bichrome motifs. Given the small sample of Period  $I_{2-3}$  it seems premature to rule out the existence of jar or cup forms in those phases. The argument for a significantly different design repertoire is simply not convincing on the basis of published data. The predominant motifs in  $I_{4-5}$  were all found in the earlier phases. Strikingly new motifs, including bichromes, are all listed as unique examples and total eleven sherds. Although the total ceramic sample size is unknown, if one takes into consideration the area excavated for  $I_{4-5}$  and sherd counts from comparable material (Shaffer, 1972, 1974a) the sample size must have been into the thousands. Therefore, how does one weight the significance of eleven sherds as indicating a new design repertoire, especially in view of the continuity demonstrated by other motifs and vessel forms? Such sherds are certainly important as possible indicators of communication with groups having different ceramic stylistic traditions, or a locally produced vessel with a special function and/or limited market, but by themselves are not sufficient indicators of significant cultural changes. The ceramics of Mundigak  $I_{2-5}$  then seem to represent a single cultural development demonstrating a limited degree of internal change with a wide range of variation.

All discussion of Period II ceramics (Fig. 3.16) have centred upon the seemingly abrupt change in the relative percentages of handmade *vs.* wheelmade pottery. Handmade pottery in  $II_1$  increases to 97% of the total *vs.* 3% for wheelmade. These percentages are in marked contrast to those noted for  $I_5$  above. Casal interpreted this change as representing a phase of cultural stagnation and every discussion since has done likewise. There are many problems with this interpretation of the data. First, what is the sample size? 97% of what? This information is not given. Are the sample sizes from Period  $I_{1-3}$  with its greatly reduced excavation area, and presumably reduced sample, comparable to the larger sampling of Period II? Data from Period  $I_{4-5}$  already indicate that the ratio of handmade *vs.* wheelmade was



**Fig. 3.16:** Mundigak, pottery from Period II: (1–4) handmade pottery; (5–7) decorated wheelmade vessels; (8) sherd showing “Rana Ghundai” style.

variable. Second, Casal notes that decorated wheelmade pottery is replaced almost entirely by crude handmade undecorated pottery. Therefore, do these frequency variations reflect a shift in ceramic technology or a change in the relative frequency of undecorated *vs* decorated pottery? If the latter is the case then such variation might be related to shifts in areal functional activities as is partially suggested by the architecture. These handmade ceramics are very similar on Casal’s description and my examination to Said Qala Coarse (Fairservis, 1956; Dupree, 1963) and Quetta Slate Temper (Fairservis, 1956), pottery types which are known to persist into a Mundigak IV context. At Said Qala (Shaffer, 1972) it was demonstrated that these types were very consistent in vessel form (similar to ones at Mundigak) but that their relative frequency fluctuated significantly within any given occupation horizon (Shaffer, 1972: 251–2). Similar fluctuation can be found in Period II where by II<sub>3</sub> handmade pottery has a frequency of only 60%. Moreover, continuity in architecture and other artifact-types,

including an increased frequency in metal and luxury objects, hardly reflects cultural "stagnation". Therefore, the changed frequency of handmade *vs* wheelmade pottery may reflect important cultural factors but it does not indicate a well defined cultural change from Period I and certainly not a period of cultural "stagnation" or "devolution".

All pottery in Period II was manufactured from a buff-red paste, however, the handmade pottery had coarse tempering materials (chaff and/or crushed rock) added. Among the handmade pottery the predominant vessel forms are the simple angular-walled bowls, and a large, wide-mouthed straight-sided jar with a pinched rim (Fig. 3.16 nos 1-2) which appears for the first time in II<sub>1</sub> and continues through Period IV. A shallow flat bottomed bowl with vertical walls (Fig. 3.16 no. 3) appears in II<sub>2</sub>, and another bowl with sharply incurving walls (Fig. 3.16 no. 4) appears in II<sub>3</sub>. Both these handmade vessel forms continue through Period IV. A single example of a handmade pedestal vessel was found in this period. Casal mentions that a few handmade examples were decorated but the overwhelming majority were undecorated.

Both decorated and undecorated examples of wheelmade pottery were found, and by II<sub>3</sub> the frequency of wheelmade pottery had reached 40%. The most common vessel forms were the angular-walled bowls and the globular collared jars recorded for Period I. Ring bases were common on bowls and a single pedestalled vessel was found. Decoration was found mainly on bowls whose surface had been treated with a thin white or buff coloured wash. Motifs were confined by black geometrics the most common of which included: festoons below the rim (found in I<sub>4-5</sub>); undulating horizontal lines interspaced with horizontal lines (Fig. 3.16 no. 6) (frequent in III<sub>1-3</sub>); and, an undulating line bordered by a lower horizontal line and filled with hatches (Fig. 3.16 no. 5) (also frequent in later periods). A unique sherd with a motif having a straight line with opposing perpendicular lines at opposite ends (Fig. 3.16 no. 7) was found in II<sub>3</sub>. This particular motif became increasingly popular in later periods.

A single buff paste sherd with a "grey slipped" exterior (burned?) and light red interior was found in II<sub>1</sub>. It was decorated with a brown motif of parallel horizontal lines bordering a panel characterized by a central undulating line offset on both sides by opposing hatch marks (Fig. 3.16 no. 8). This sherd, like the eleven unique sherds from Period I, is significantly different from the rest of the ceramics. Casal notes its strong resemblance to pottery from Period II at Rana-ghundai (Ross 1946; Fairservis 1959) in northern Baluchistan. However, the sherd is even more similar (Mughal, 1970: 302) to De Cardi's (1965: 133) "loop-and-tassel" design of Togau were found in Siah II. Togau ware of this period at Siah is also associated with Kot Dijian and Amri pottery similar to the unique sherds found in Mundigak I<sub>4-5</sub> (see discussion on comparative relationships). To resolve the problem of different but contemporary intrusive types occurring in two stratigraphic levels at Mundigak, Mughal (1970: 302) has stated that "... the single specimen from Mundigak II<sub>1</sub> level may also be placed with the assemblages of level I." However, Casal gives an exact provenance for this sherd and it appears to be definitely associated with the fill of a structure from Period II<sub>1</sub>. The specific question which this sherd, and the entire ceramic assemblage, focusses on is: "How culturally distinct are Mundigak I and II?" Are they separate and distinct cultural periods or a cultural continuum which happened to be separated by a midden deposit? It is argued here that Mundigak I<sub>1-3</sub> are known only from a very limited sample and that I<sub>4-5</sub> is not much different from II<sub>1-3</sub> if the question of handmade *vs* wheelmade pottery is placed in proper perspective. I

propose that Mundigak I (and especially I<sub>4-5</sub>) and II represent the same basic period of cultural development demonstrating a continuum of change. A similar cultural continuum can be determined for the ceramics of Mundigak II–III.

Although Period III represents a continuous development from previous periods it contains some strikingly new ceramic styles (Figs 3.18–3.21). Wheelmade pottery gradually becomes dominant, increasing from 45% in III<sub>1</sub> to 85% in III<sub>6</sub>. It is interesting to note that handmade pottery never disappears from the Mundigak sequence and assumes a stable relative frequency similar to that found in III<sub>6</sub> (15%). More important, it is during this period that the Quetta style of pottery is found, indicating connections with southern Turkmenistan, eastern Iran and northern Baluchistan. However, the ceramic diversity found in this period coupled with Casal's failure to develop a descriptive typology makes a descriptive summary of Period III ceramics extremely difficult. To facilitate description and comparisons the following categories have been imposed on the data: Handmade; Wheelmade, Undecorated and Decorated; and finally Intrusive or Special Function.

*Period III Handmade Pottery* (Fig. 3.17 nos 1–2). Paste and vessel forms remain unchanged from previous periods. The major vessel forms are: the large mouth, straight-sided globular jars; and, straight-angular walled bowls. The shallow bowl forms become more infrequent. Exterior surfaces are almost always heavily stained with carbon indicating use near an open fire. Vessels made with the rock tempered paste quite often have a thin buff wash applied to the exterior.

*Period III Wheelmade Pottery, Undecorated.* Undecorated pottery was manufactured from a buff-red paste with either a self- or sand-temper (see also Fairservis, 1956: 242, 244; Dupree, 1963: 73, 76). Two variants are found, one whose surface colour is identical to the paste, and another where the surface had a thin buff wash. Globular jars with simple everted rims are found in the earliest phases and collared jars appear initially in III<sub>5-6</sub>. The straight-angular walled bowl predominates between III<sub>1-4</sub> but begins to co-vary with a S-profile wall bowl in III<sub>5-6</sub>. It seems that a small relatively straight sided beaker was also manufactured.

*Period III Wheelmade Pottery, Decorated* (Figs 3.17 nos 3–12; 3.18). The vast majority of decorated pottery is of a single basic type with two variants. Both variants have a buff-red paste with self- or sand-tempering. The major difference is that one has its surface coated with a very thin white translucent wash or no wash at all while the other's surfaces are coated with a cream-buff opaque wash (see also Fairservis, 1956: 259, 261; Dupree, 1963: 78–9). At present it is impossible to determine if these variants were the result of conscious production or merely firing, paste, or other variables which were allowed to fluctuate because of cultural insignificance. Identical vessel forms and vessel form changes as found among undecorated pottery are delineated among the decorated pottery. However, there is higher frequency of ring and pedestal based bowls among decorated pottery. Black or red motifs are almost exclusively geometric until III<sub>6</sub> when what appear to be plant motifs are identified (palm fronds/pipal leaves or a stylized leaf). Particularly popular motifs were: festoons; festoons and horizontal, vertical or zigzag lines; horizontal and vertical zigzag lines; open panels formed by multiple lines; and, more rarely stepped triangles and unaligned stars or undulating lines. Open spaces of these motifs were commonly filled with hachures, undulating lines, and rarely cross-hachures. Motifs often divided the vessel into thirds or quarters and, in the case of

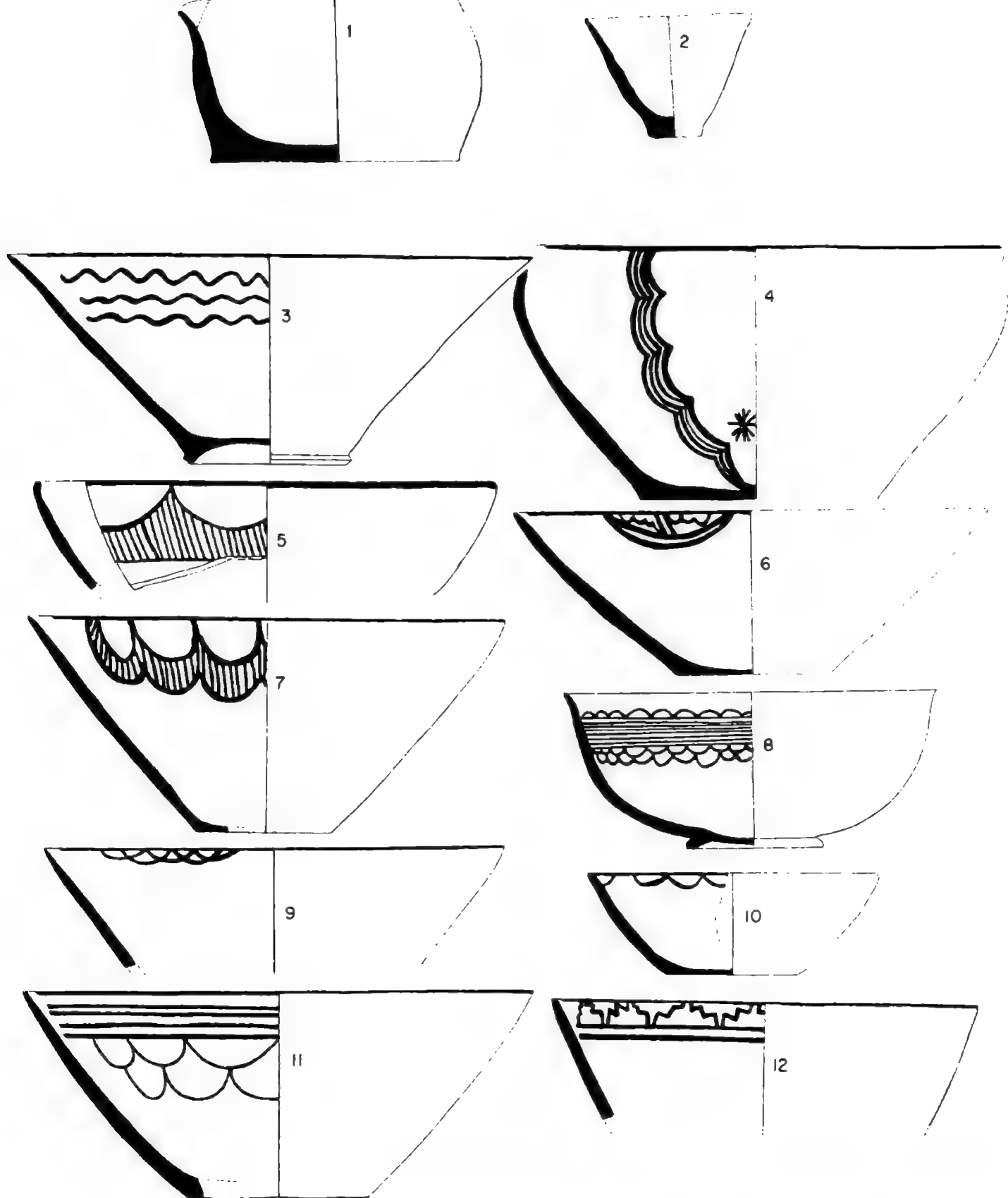


Fig. 3.17: Mundigak, pottery from Period III: (1-2) handmade pots; (3-12) wheelmade, decorated pottery.



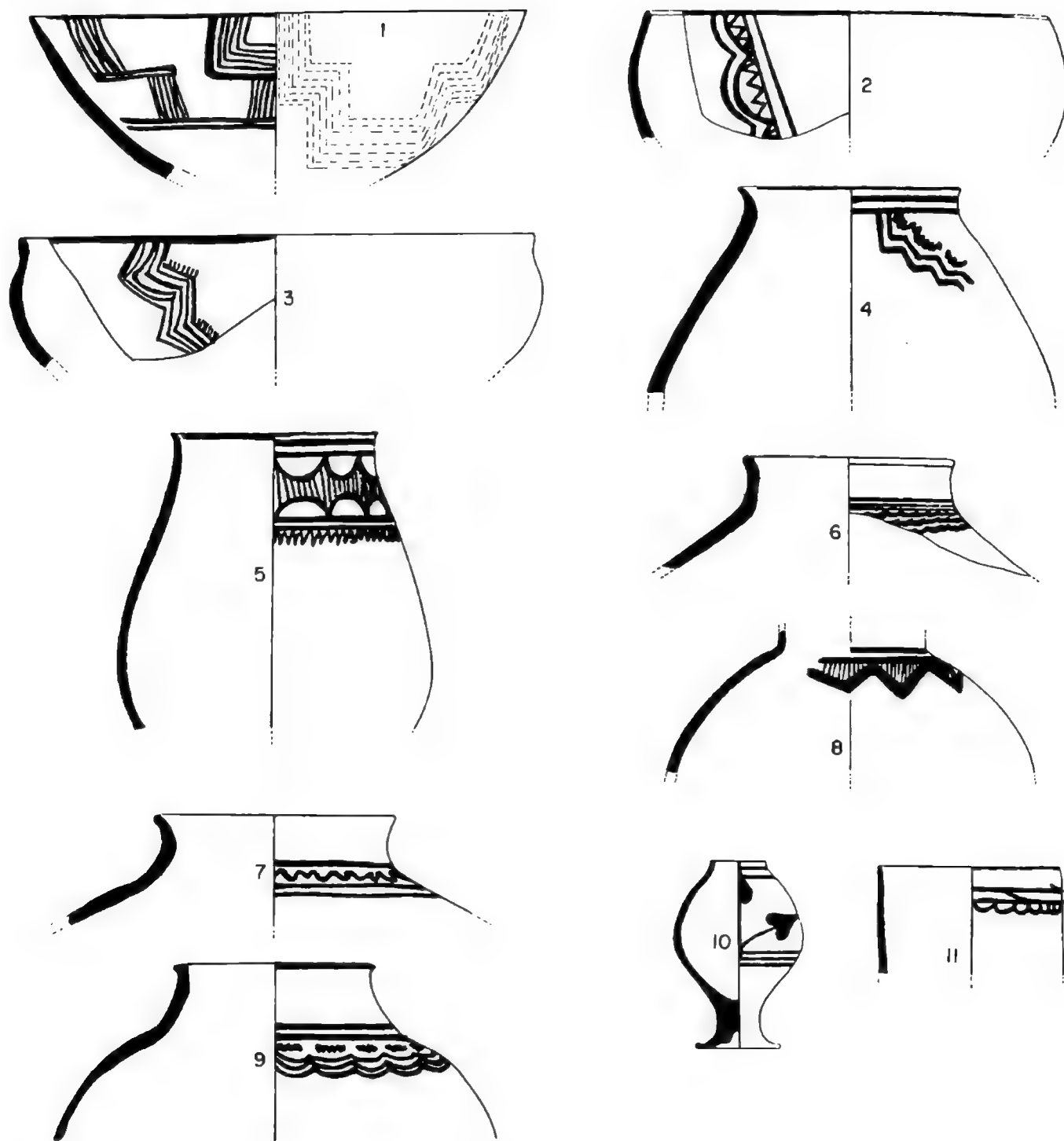


Fig. 3.18: Mundigak, decorated pottery from Period III.

bowls, incorporated large open areas into the overall design. Often, however, decoration was confined to a few horizontal bands around the vessel rim.

An important, but infrequent (less than 10%), type of decorated pottery which appears first in III<sub>1</sub> and occurs with increasing frequency throughout the period is Quetta Ware (Figs 3.19, 3.20) (Piggott, 1947). Paste colour is generally buff (although a light red is not uncommon) and has a self- or sand-temper. The surfaces are coated with a thick to thin buff slip (see Fairservis, 1956: 263) which ranges in colour from white to cream and occasionally

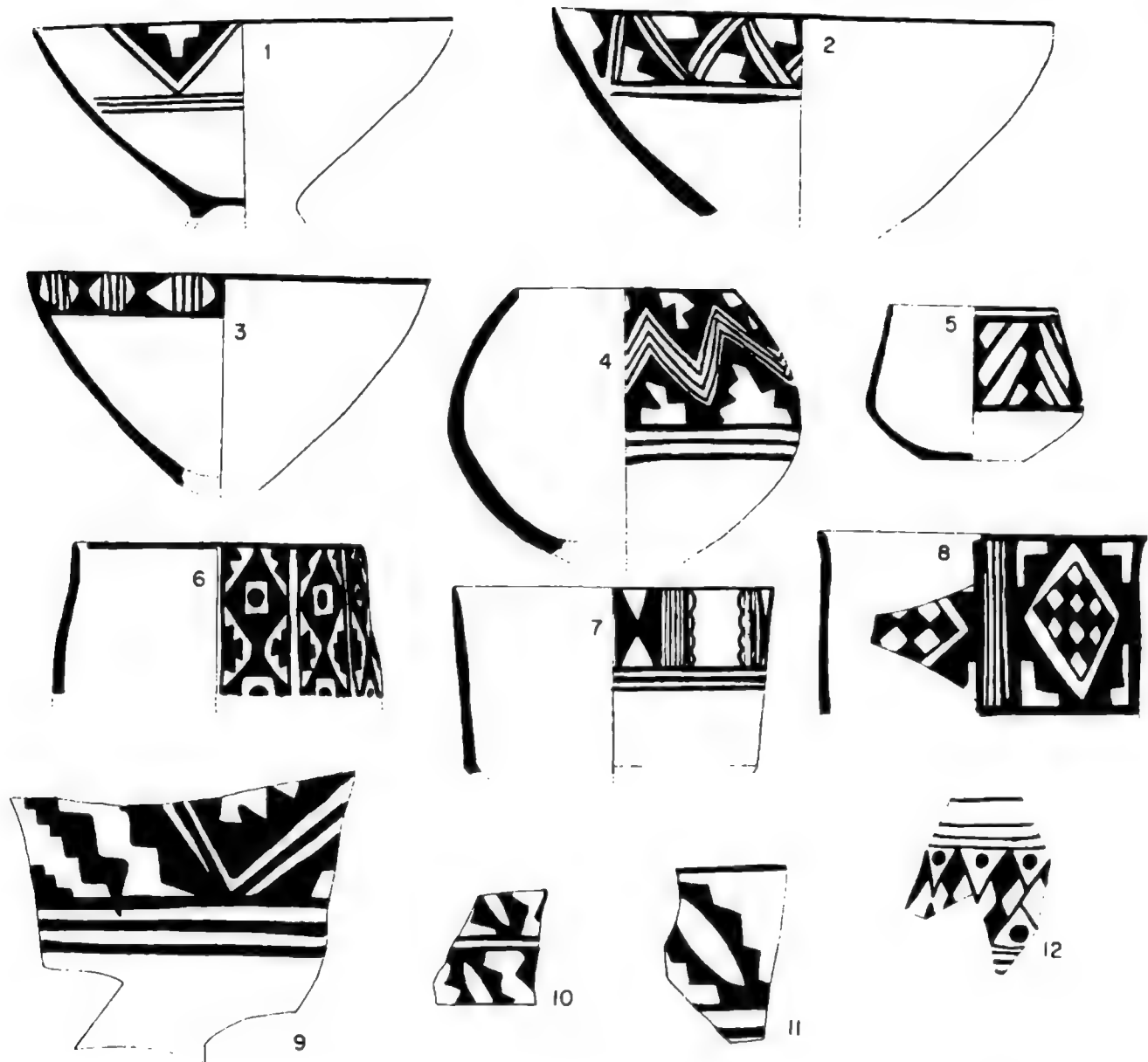


Fig. 3.19: Mundigak, decorated pottery from Period III, showing Quetta "solid" style.

has a grey, or even greenish, colour resulting from either primary or secondary firing. The primary vessel forms seem to be beakers and to a much lesser extent bowls and jars. However, the most distinctive trait of this pottery is its motifs. The black, and more rarely red, motifs are entirely geometric, but Casal and others distinguish two variants based upon differing emphasis on either solid or linear motifs. The solid variant (Fig. 3.19) emphasizes solid geometric motifs to the extent of sometimes producing a negative effect. Common motifs of this variant are: stepped triangles; triangles; opposing triangles; diamonds with an internal square and black dot; checkerboard diamonds; and, light coloured ellipses and crosses from below, or surrounded by, stepped triangles. The linear variety (Fig. 3.20) is characterized by closely set thick lines forming opposing stepped triangles, parallel zigzag lines, and parallel zigzag lines infilled with crosshatching. In both variants the motifs are executed in a single horizontal band near the rim which is sometimes divided into panels. Quetta ware

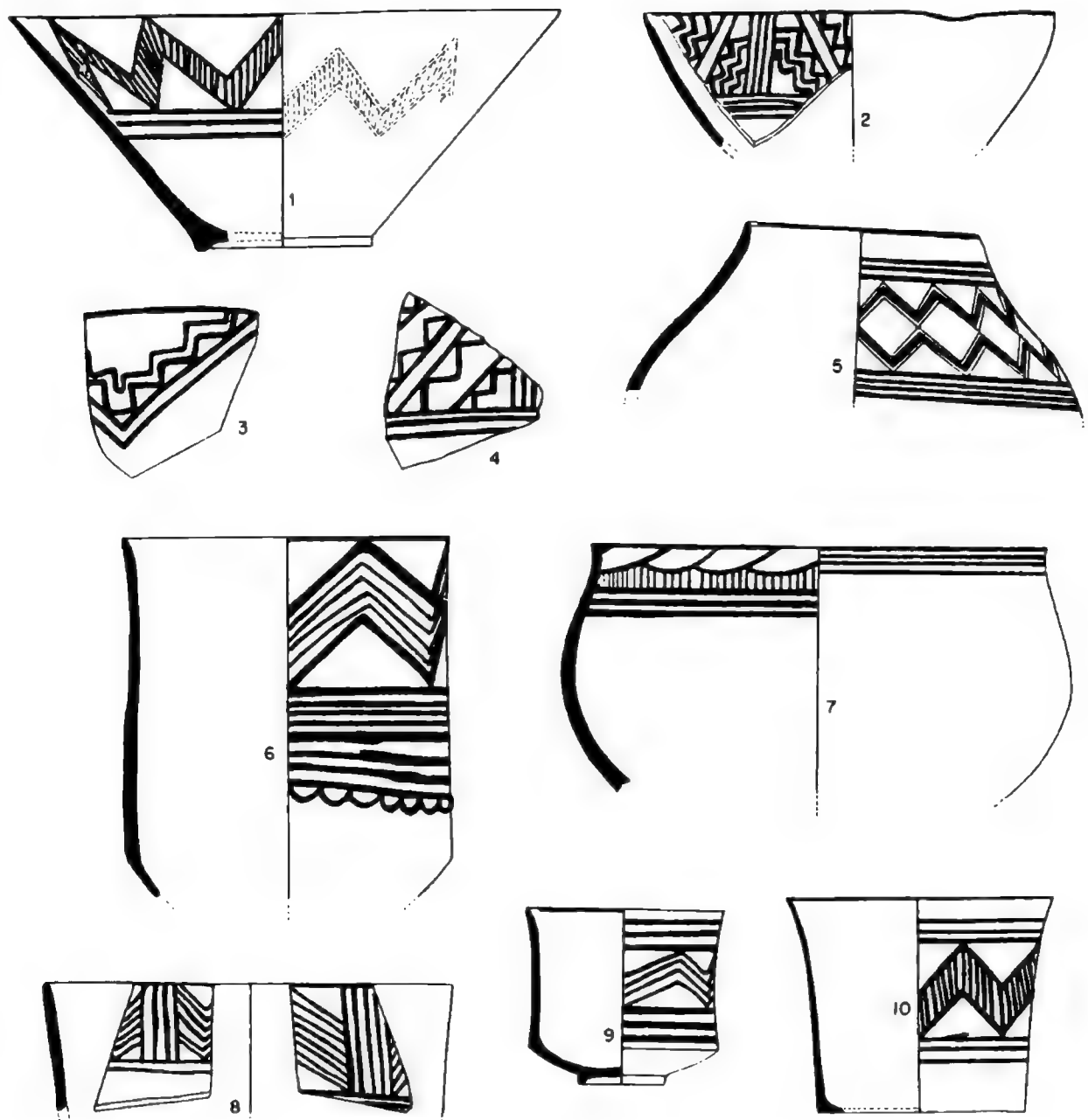
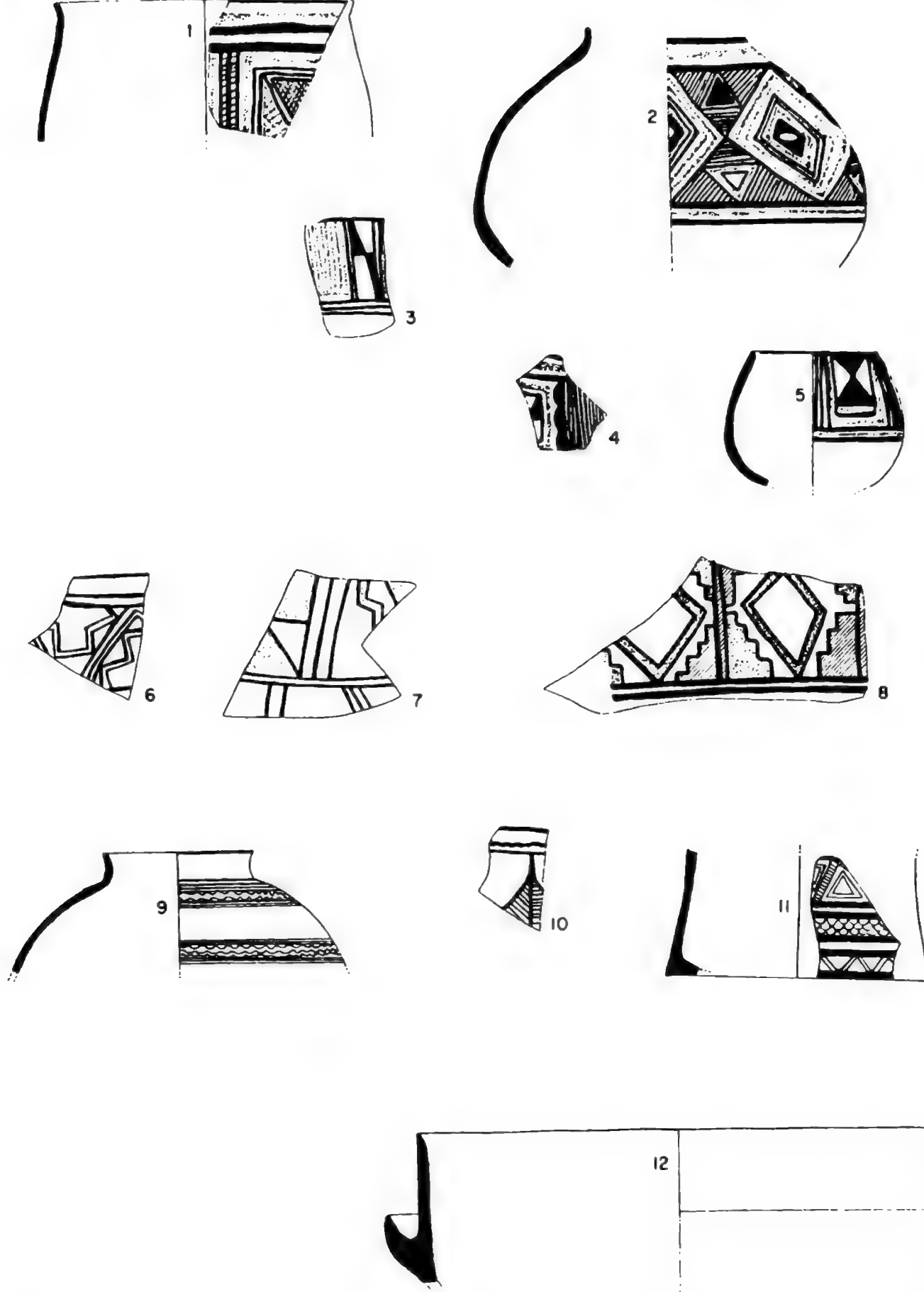


Fig. 3.20: Mundigak, decorated pottery from Period III, showing Quetta "linear" style.

demonstrates a generic similarity to other Mundigak ceramics but also with the Namazga, Geoksyur and Shahr-i-Sokhta pottery (Tosi, 1973; Biscione, 1973).

*Period III Wheelmade Pottery, Intrusive or Special Function.* Included in this category are those ceramics which because of their rarity or aberrant motifs and/or vessel forms indicate that they are intended for limited/special functions or represent foreign imports (Fig. 3.21). Amri (in Sind) style bichromes, identified for the first time in Period I, are found in small quantities throughout Period III (Fig. 3.21, nos 1–5). Of particular importance was the location of a double-rim white slipped Amri vessel in III<sub>4</sub> (Fig. 3.21, no. 12). Also found in III<sub>4</sub> were sherds decorated in the style of Amri or Nal (central Baluchistan) bi- or polychromes (Fig. 3.21, nos 6–8). These sherds had large black geometric motifs infilled with different colours (yellow, red-orange and white). Another important sherd from III<sub>4</sub> was a very dense buff paste with an excellently executed pipal leaf motif (Fig. 3.21, no. 10) in the style of Faiz Mohammad type of



**Fig. 3.21:** Mundigak, pottery from Period III: (1–5) Amri style bichrome ware; (6–8), sherds of Amri or Nal style bichrome or polychrome decoration; (9) Kot Dijian style vessel; (10) sherds of Faiz Mohammad style; (11) decorated vessel of canister form; (12) double rim of Amri style.

pottery from the Quetta valley (Fairservis, 1956). Finally, from III<sub>5</sub> several sherds from a vessel with a large horizontal brown band near the rim resembling closely the Kot Dijian pottery from the Indus valley (Fig. 3.21, no. 9).

The ceramics from Period IV (Figs 3.22- 3.32) are marked by several changes in vessel

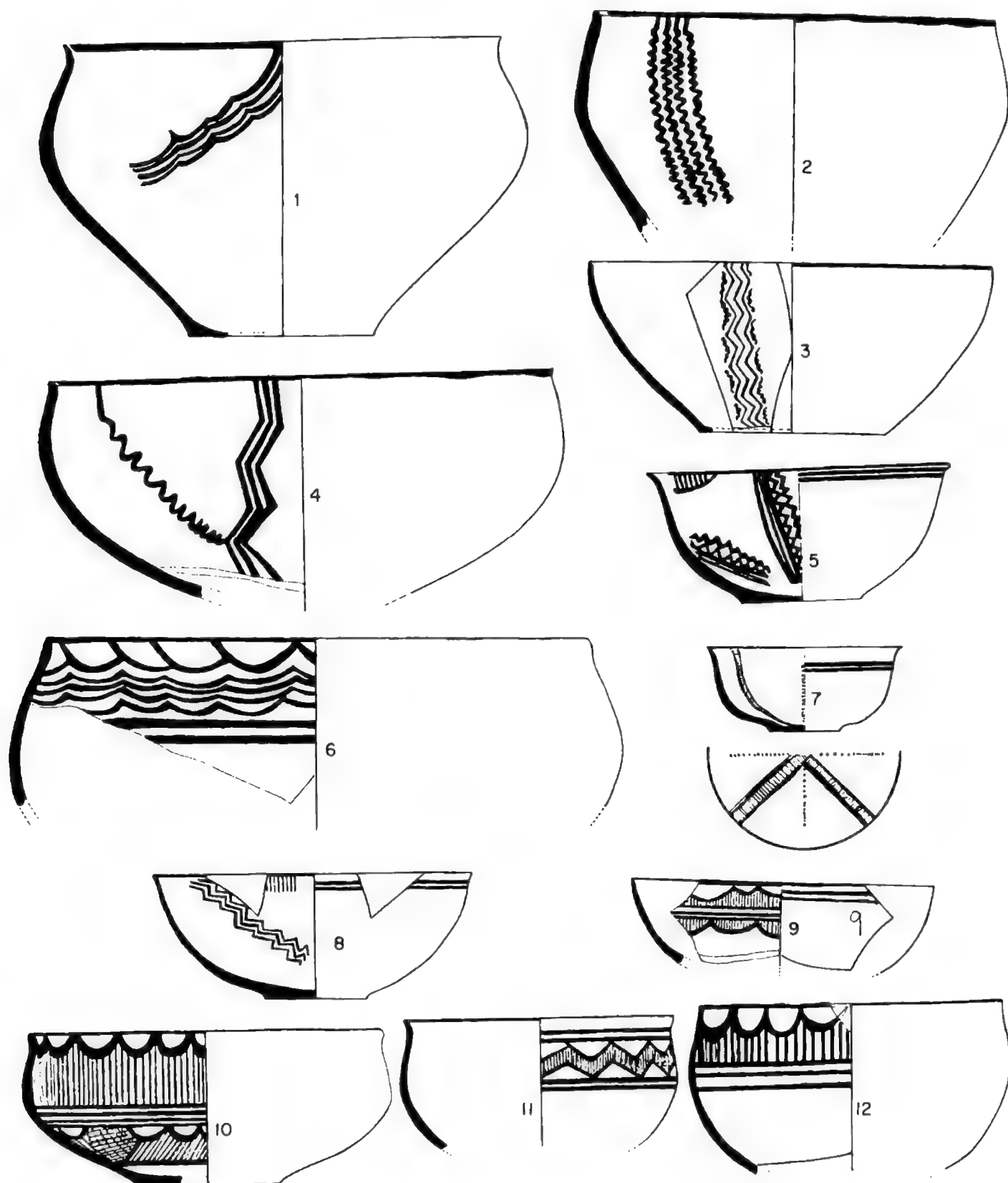


Fig. 3.22: Mundigak, wheelmade and decorated pottery from Period IV<sub>1</sub>.



forms, motifs, a new red paste and the disappearance of Quetta Ware. Among the wheelmade pottery a true red paste increases in frequency at the expense of the previous buff-red paste. This transition in ceramic paste colours is probably related to the new types of large ovens ("kilns") also associated with Period IV. The red paste pottery is also characterized by an increasing utilization of a red slip decorated with distinctive, but related, black motifs. There is also an increased frequency and variety of limited or special function pottery.

*Period IV, Handmade Pottery.* Casal comments that this becomes rare during Period IV. However, my examination of Mundigak pottery at the Kabul Museum indicated that it was still present in some frequency. Moreover, Casal's frequency chart (1961: Fig. 48) indicates that the major jar vessel form which characterized this pottery in earlier periods maintained the same frequency level as at the end of Period III. These factors, in the absence of better data, suggest that handmade pottery continued to be manufactured, albeit at a reduced frequency (less than 10%), and utilized as utility vessels.

*Period IV, Wheelmade Pottery, Undecorated.* Besides the introduction of red paste this pottery underwent significant vessel form changes. It is important to note that these vessel form changes are equally as applicable to wheelmade decorated pottery. A major change occurs among bowl forms in that the previous angular-wall form is essentially replaced by the S-shaped wall form encountered first in III<sub>5-6</sub>. Recorded for the first time in IV is a simple hemispherical form which increases in frequency, and more rarely a sharply carinated form. Except for a large relatively straight sided variety jar forms are almost exclusively globular with collars having straight or everted lips. Beakers are now predominantly manufactured with an S-shaped wall profile. Some of the smaller beakers may have pedestal bases with flaring or carinated walls.

*Period IV, Wheelmade Pottery, Decorated.* The most striking feature of this pottery was the significant frequency increase of stemmed goblets (Fig. 3.24) with incurving sides (first identified in III<sub>5</sub>) in IV<sub>1</sub> and its equally significant decrease in IV<sub>2-3</sub>. These vessels were decorated with an extremely high frequency of zoomorphic motifs which are themselves a significant addition to the Mundigak motif repertoire. Horned caprids (ibex?), felines, birds and fish were depicted in a solid or hatched style in a wide horizontal band. Equally frequent were solid or hatched floral motifs, especially the pipal leaf. Geometric motif combinations of parallel zigzag and tight undulating lines executed diagonally were also recorded on these vessels. A related vessel form which had the same frequency pattern as the above form is a short stemmed goblet with an S-shaped wall sometimes marked by a sharp carination. This form is usually decorated with geometrics particularly a band of parallel zigzag lines.

Another important change is the decreased frequency of Quetta Ware in IV<sub>1</sub> (Fig. 3.26) and its total absence from IV<sub>2-3</sub>. Those examples which are found lack the characteristic solid geometric motifs so common previously. Even the linear style of Quetta Ware lacks the usual geometric elements such as stepped triangles, crosses, etc. Motifs on the few examples found are mostly curvilinear or quasi-floral (termed bucranium by some). Interestingly a certain degree of stylistic similarity can be distilled between the previous Quetta style and the motif combinations found on the remaining decorated pottery of IV.

The remaining decorated pottery of Period IV, especially IV<sub>1</sub> demonstrates a generic continuity with that in previous periods (Figs 3.22, 3.23, 3.25). There is a definite tendency

to utilize a more opaque white or cream coloured wash and the motifs are predominantly black. In general there is a much greater use of hatching to fill-in large open areas eliminating some of the more "openness" of the preceding period. There is a much greater usage of parallel zigzag lines both horizontally and vertically. Tightly undulating lines are used as free motifs in place of simple solid lines, and also as a sort of hatching. New geometric motifs are limited and include circles within circles and more rarely intersecting circles. The previously

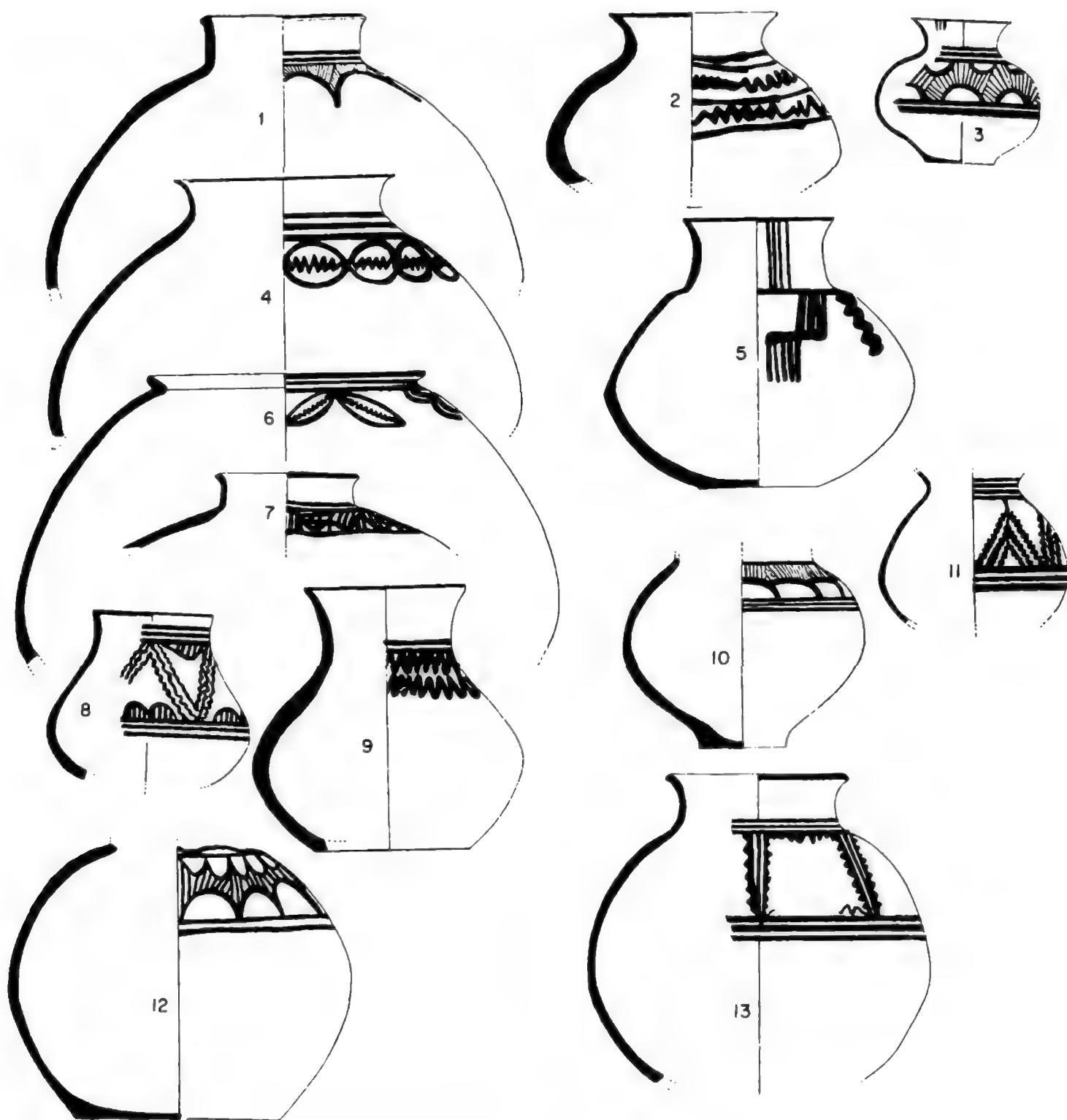


Fig. 3.23: Mundigak, wheelmade and decorated pottery from Period IV<sub>1</sub>.

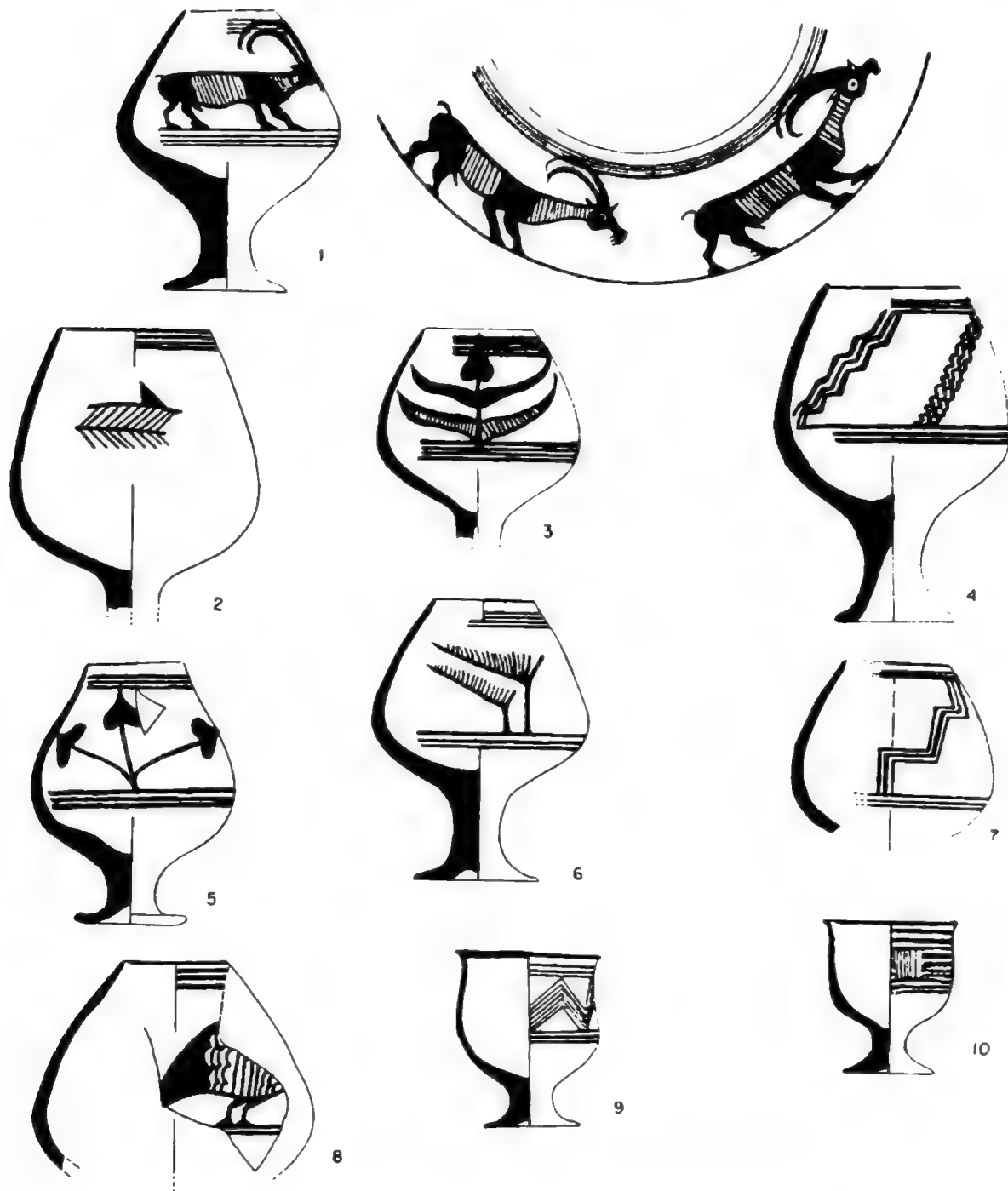


Fig. 3.24: Mundigak, wheelmade and decorated pottery from Period IV<sub>1</sub>.

mentioned animal and plant motifs are significant additions, but the animal motifs are infrequent in IV<sub>2</sub> and disappear by IV<sub>3</sub>. Plant motifs, especially the pipal leaf, continue throughout the period in decreasing frequency. Solid geometric motifs are rare and usually confined to beakers.

The later phases, IV<sub>2-3</sub>, are distinguished by an increasing quantity of red slipped red ware decorated with black motifs. These motifs are not radically different from those already recorded and would if anything appear to be generic to the previous ones. Perhaps one of the more distinguishing aspects of this decorated pottery is its correlation with shallow hemispherical bowls with everted rims and a shallow sharply-angular walled bowl (Fig. 3.30,

nos 2, 3). The co-variance between this black-red slipped red ware and Quetta Ware has never received adequate attention, but it is interesting to note that in the same phases of the period several interesting possible intrusive potteries are recorded from regions to the southeast.

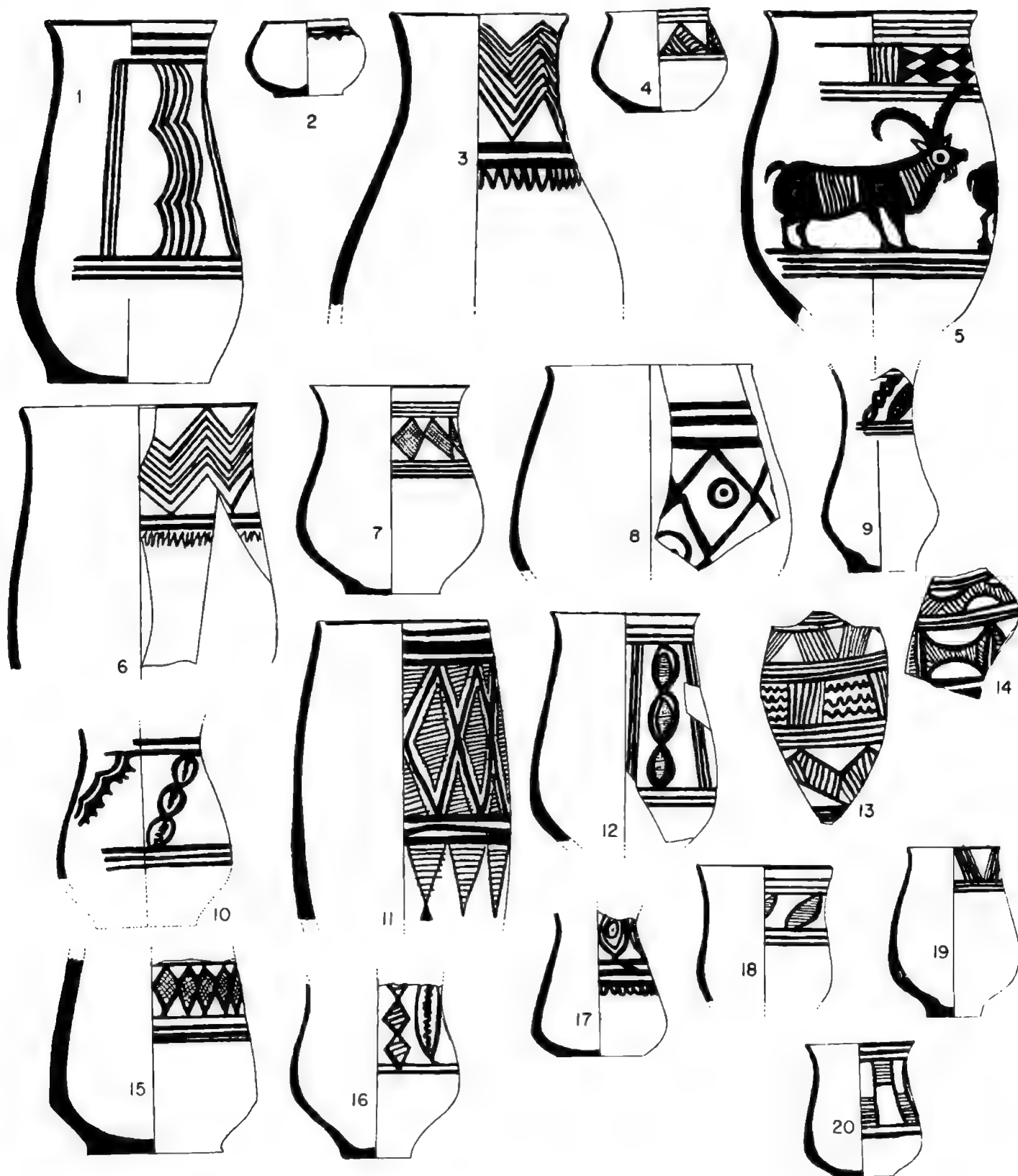


Fig. 3.25: Mundigak, wheelmade and decorated pottery from Period IV<sub>1</sub>.

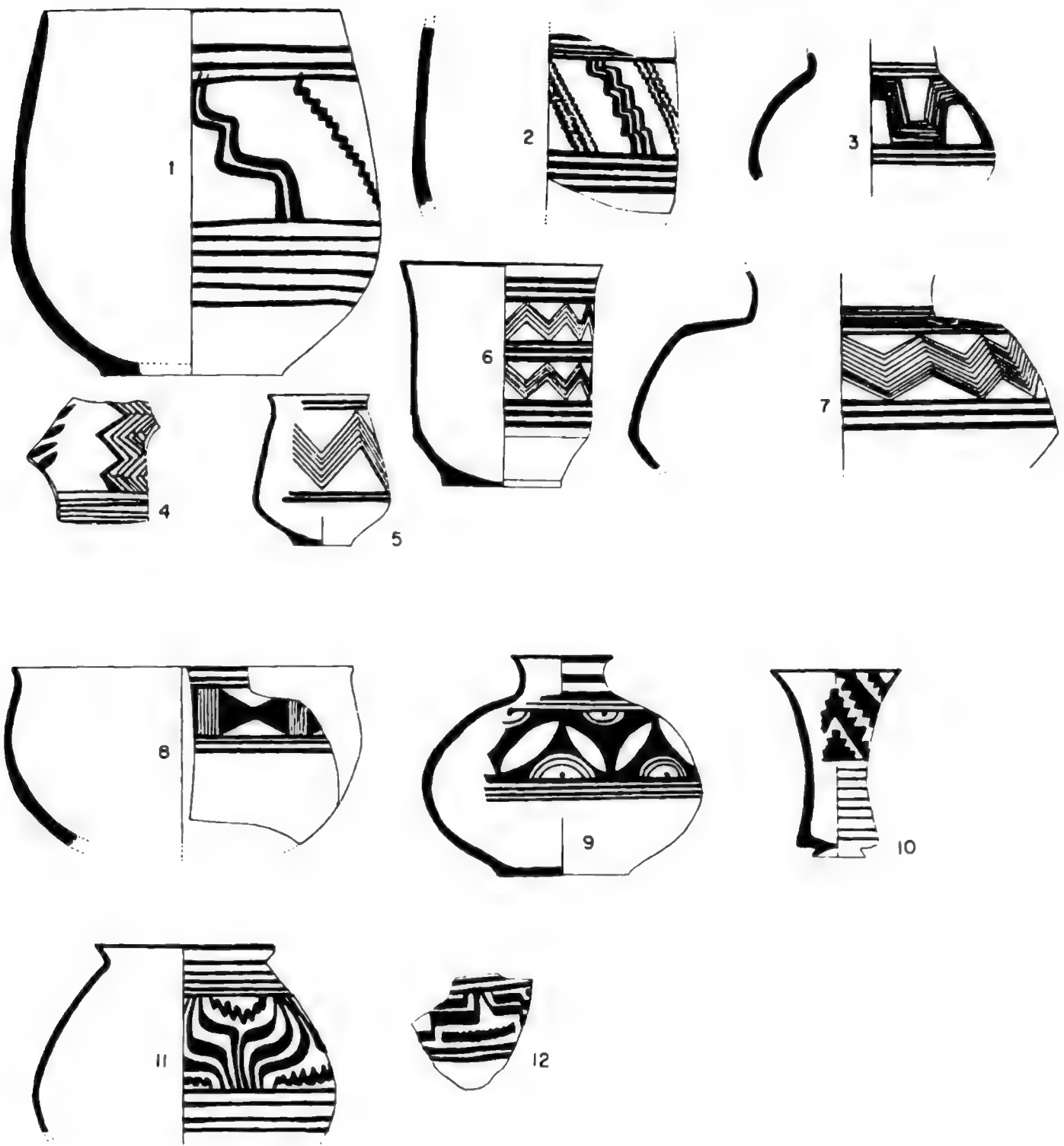
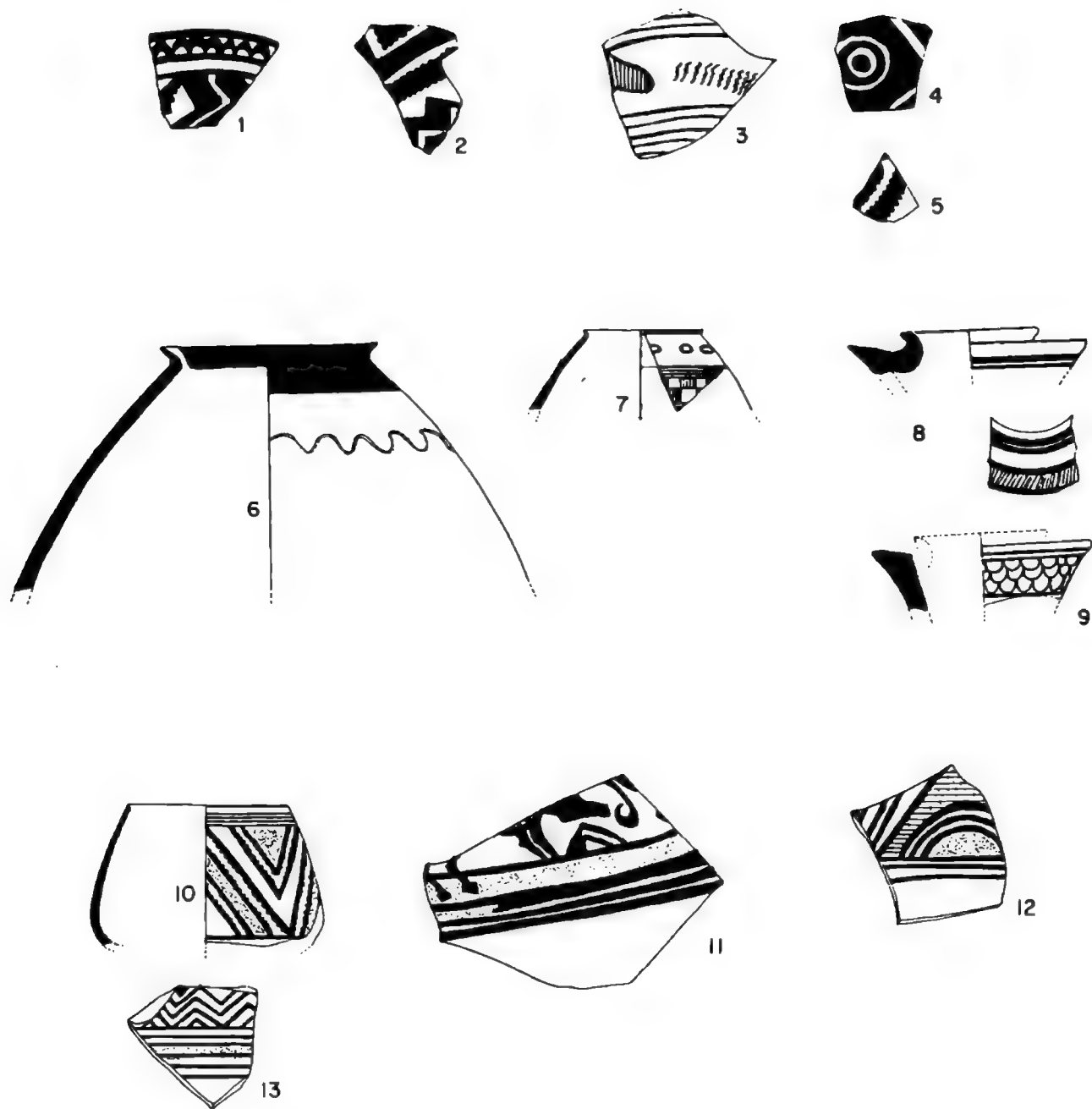


Fig. 3.26: Mundigak, decorated pottery of Quetta style, Period IV<sub>1</sub>; (1-7) "linear" style; (8-10) "solid" style; (11-12) "Bucranium" style.

*Period IV, Wheelmade Pottery, Intrusive or Special Function.* This category of pottery continued to indicate the possibility of interaction between Mundigak and regions to the southeast, northern Baluchistan and the Indus valley. Throughout Period IV sherds could be isolated which resembled potteries produced in these regions (Figs 3.27, 3.32).

Period IV<sub>1</sub> had several examples of a large collarless jar with everted rim (Casal, 1962:





**Fig. 3.27:** Mundigak, special function and/or intrusive pottery, Period IV<sub>2</sub>: (1–5) Faiz Mohammad style; (6–9) Amri and Kot Diji style; (10–13) Bichrome style.

Fig. 75, no. 249) similar to pottery found at Kot Diji. Two rim sherds from what appear to be S-shaped beakers with a sharply carinated double-rim and fish scale motif (1961: Fig. 83, nos 306, 306a) are very different from anything else found at Mundigak, but similar in style and form to Amri and Kot Diji potteries. Several examples of the Faiz Mohammed Painted wares were also found in IV<sub>1 2</sub>. Also located in IV<sub>1 2</sub> was a red and black bichrome pottery which was similar in manufacture and style to the pottery definitely indigenous to Mundigak.

Faiz Mohammad Painted pottery was also found in Period IV<sub>3</sub>, as was a complete vessel (Fig. 3.32, no. 3) of Quetta Wet type pottery (found in Baluchistan and the Indus valley in a pre-Harappan context). Also found in IV<sub>3</sub> (1961: Fig. 120, no. 485) was an isolated example of a pipal leaf motif executed in black with red infilling similar to the Sothi Wares of the central

Indus valley at Kalibangan (see Mughal, 1970: 313-8 for this and other comparisons). There are also examples of an intersecting circle motif infilled with hatching (Casal, 1961: Fig. 103, no. 496) which is very similar to late Amri and Kot Dijian ceramics. It is clear from these specific examples, and others, that during Period IV<sub>1</sub>, at Mundigak communication with Baluchistan and the Indus valley was taking place.

The ceramics from Period V are extremely problematical. This situation is partially due

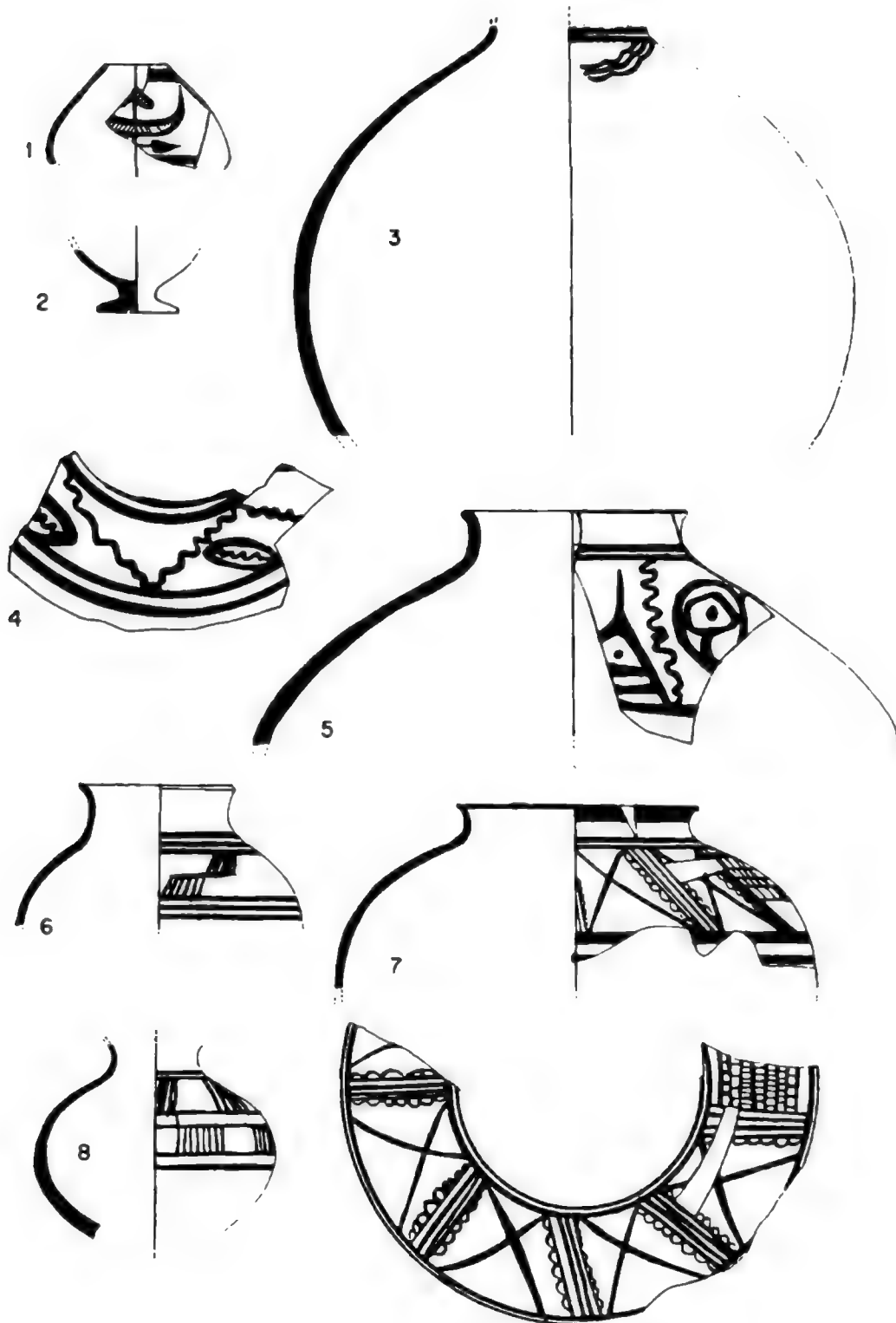


Fig. 3.28: Mundigak, wheelmade and decorated pottery from Period IV<sub>2</sub>.

to the disturbed nature of the deposits and a more limited sample size. However, the basic problem is that most of Period V ceramics are significantly different from those found in I-IV (Fig. 3.33). True, some continuity exists in that the pottery is a red ware decorated with black-violet on a red slip and some vessel forms persist (especially the hemispherical bowl with everted lip and some jar forms). On the other hand there is a pronounced resurgence of handmade pottery coupled with a different stylistic tradition of decoration, and new vessel forms.

Unlike previous fluctuations in handmade pottery (I-III) which were confined to the coarse tempered utilitarian vessels (also persisting in V) handmade pottery in Period V had new vessel forms, black on red slipped decoration, and was made from a finer paste. It is difficult to evaluate the significance of this change since no relative frequency data is available. Most of the handmade ceramics appear to be bowls, but not all bowls were handmade. Overall, regardless of manufacturing method, these new forms were deeper and more curvilinear. Among the various varieties three basic bowl forms can be defined: (1) simple hemispherical; (2) a form with the lower three-quarters being a straight-angular wall with a slight convex curve ending in an S-shaped, straight or incurving lip; and, (3) a more globular bowl with an S-shaped profile. Simple circular handles are a common feature on many vessels particularly the last vessel form (3). In contrast jar vessel forms, both decorated and undecorated, are predominantly wheelmade. Both collared and uncollared globular jars were



Fig. 3.29: Mundigak, polychrome vessel from Period IV.

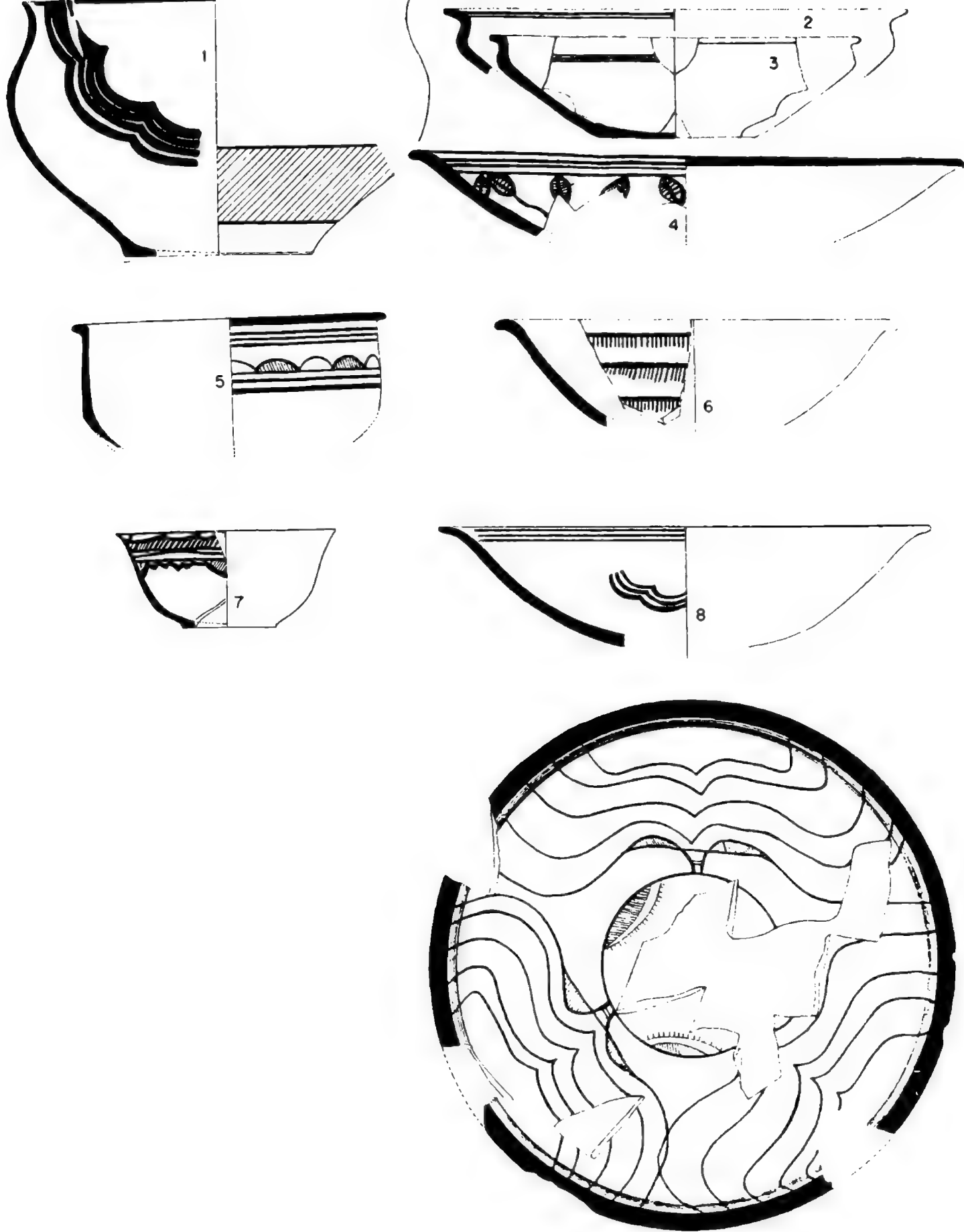


Fig. 3.30: Mundigak, wheelmade and decorated pottery from Period IV, Nos 6 and 9 are greywares

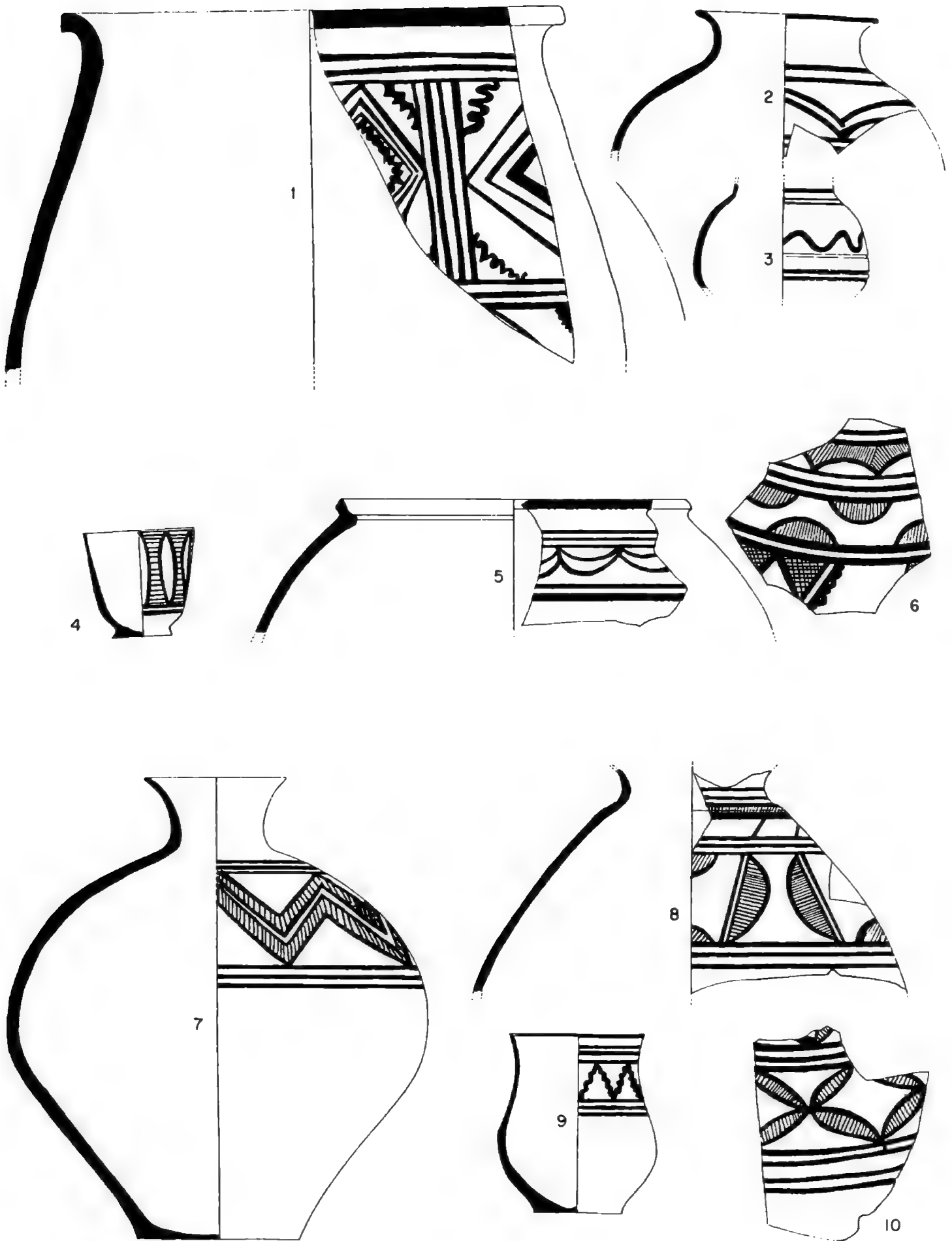


Fig. 3.31: Mundigak, wheelmade and decorated pottery from Period IV.



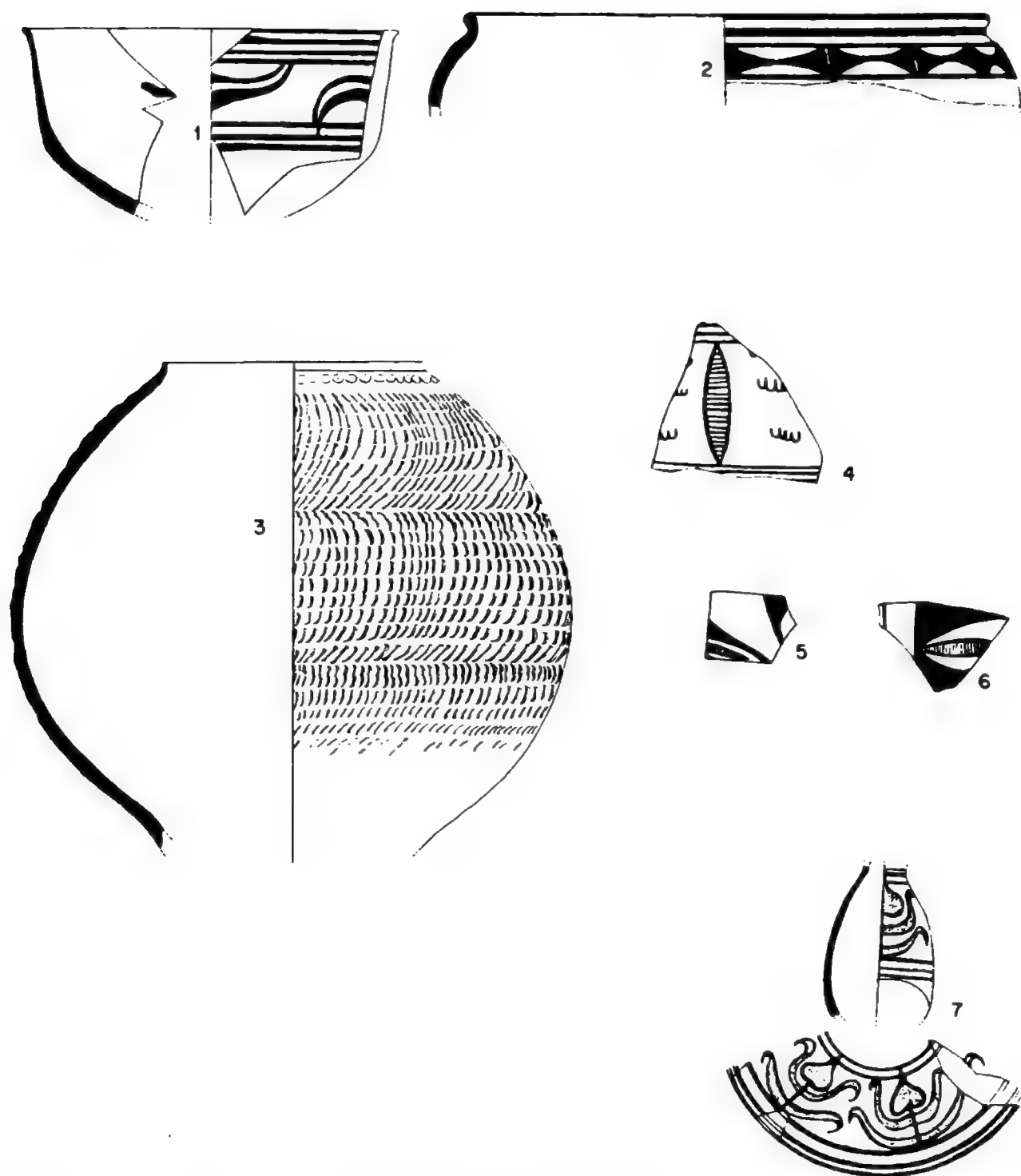


Fig. 3.32: Mundigak, special function and/or intrusive style pottery from Period IV<sub>3</sub>: (1-2) Quetta style; (3) Quetta "Wet" ware style; (4) Faiz Mohammad style; (5-6) Late Amri style; (7) Bichrome style.

found with either everted or simple rims. Judging from the illustrations jars appear to be mainly large in size and sometimes manufactured with spouts.

The almost completely geometric black or violet motifs are executed on a red slip which on some examples is extremely thin being almost a wash. A few highly stylized "stick" figure zoomorphic motifs were found, and, more rarely, a horizontal frieze of horns. The basic decoration style is highly conventionalized, consisting of a single horizontal band of cross-

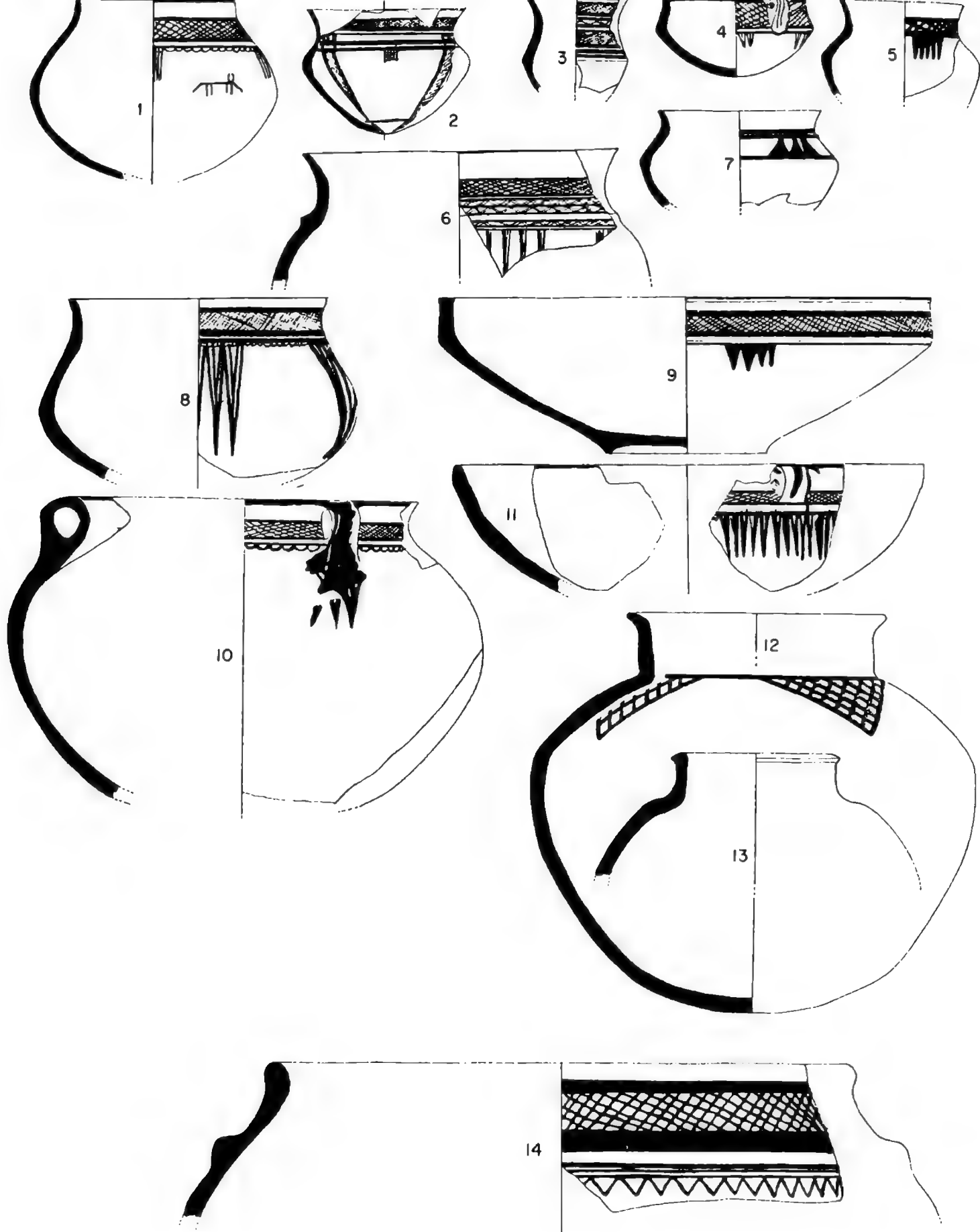


Fig. 3.33: Mundligak: decorated pottery from Period V.

hatching near the vessel rim. Sometimes multiple bands are found separated by open spaces which can be filled with additional simple geometric motifs. Extending downward from these bands, and dividing the vessel surface into panels, are a series of solid or multiple-lined isosceles triangles or, more rarely, diamond motifs. Sometimes these elements are joined at the top by a festooned band. These motif combinations are found on both bowls and jars. However, on jar forms a more simple pattern of cross-hatched triangles can be found as well as cordons emphasizing the motifs.

The ceramics of Period V are not only distinct from those of previous periods at Mundigak but also from those located in any immediately surrounding region. Unlike previous periods Period V did not have any intrusive or special function ceramics. The interactions with Baluchistan and the Indus valley recorded earlier appear to cease with Period V. There are, however, some stylistic comparisons with other regions which can be made which provide a comparative context for this interesting and problematical period.

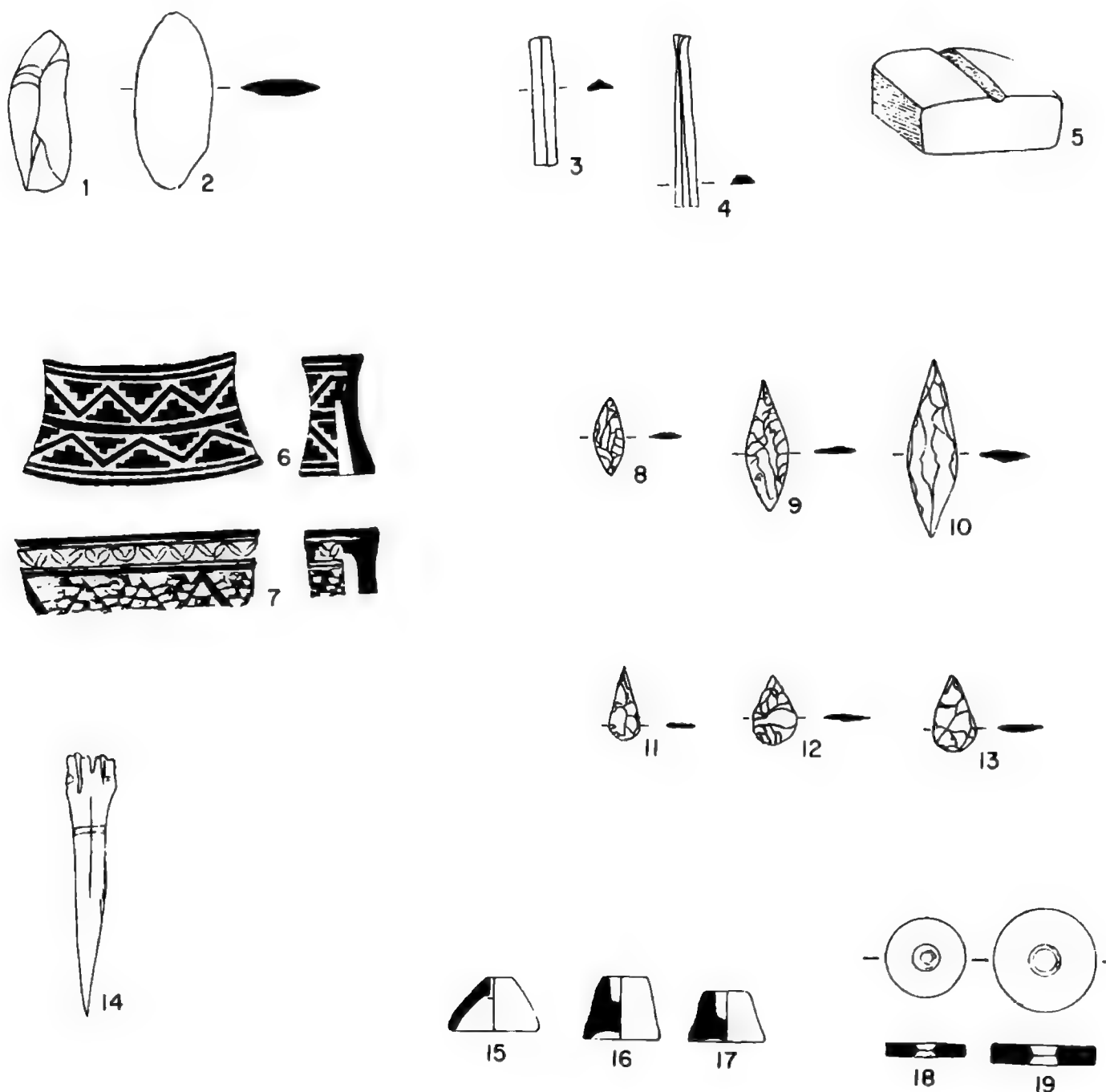
### *Lithic Artifacts*

Artifacts which will be discussed here are those which have a utilitarian function. Those artifacts which because of the nature of the object produced (beads, amulets, small vessels, etc.), stone of manufacture (semi-precious or precious), and comparatively small quantity indicate a non-utilitarian function will be discussed under Small Miscellaneous Artifacts (p. 144).

Recorded in all occupational periods at Mundigak were rectangular milling stones and associated rectangular to oval handstones (Fig. 3.37b). Milling stones were manufactured from a medium to coarse grain basaltic boulder. They had a single level working surface (or concave depending upon degree of use) sometimes with one raised end. Many of these stones had their unworked surface smoothed by water action. Handstones were manufactured from a medium to fine grain basaltic cobble and had grinding scars on one or both surfaces. Besides these milling and handstones some crude mortars and pestles were identified for Period I (Fig. 3.37c). Another type of groundstone artifact found in Periods I<sub>5</sub>-III<sub>6</sub> was a perforated, large white limestone "weight". Stones with a long axis groove appear in III<sub>4</sub> and increase significantly in remaining occupations ("counter-weights"?) (Figs 3.34, no. 5). Large trapezoidal hoes retouched for hafting and having a polish resulting from use were located from the end of Period I until the final occupation.

Beginning in Period I<sub>4</sub> and persisting throughout the entire sequence at Mundigak is a type of knife-scraper manufactured from large cortex flakes (Fig. 3.34, nos 1-2). These flakes were usually retouched along one edge and were occasionally polished through usage. Flint artifacts appear for the first time in Period II, in the form of blades and points. Initially these blades are large and have triangular (II) (Fig. 3.34, no. 3) and trapezoidal (III) (Fig. 3.34, no. 4) cross-sections, but are very rare. However, in Period III<sub>5-6</sub> microlithic (2-5 cm) blades are introduced in quantity and are located throughout the remaining periods of occupation. Bifacially flaked lanceolate flint points were found first in Period II<sub>2</sub> and continue throughout the sequence (Fig. 3.34, nos 8-10). Two types are distinguishable on the basis of size, large and small, with several examples of extremely large points located in III<sub>6</sub>. In Period IV a new

type of point is introduced which is triangular with a rounded base and persists through Period VI (Fig. 3.34, nos 11–13). It is important to note that points of all types are found in some quantity. Period IV is also distinguished by several examples of a small concave sided cylindrical objects with central perforation, and Quetta Ware style geometric motifs engraved on their sides (Fig. 3.34, nos. 6–7). These objects are manufactured from alabaster and other hard stones. A few pieces of unworked galena are also found in Period IV, but their purpose is unknown.



**Fig. 3.34:** Mundigak, miscellaneous objects: (1–2) retouched flakes; (3–4) chert blades; (5) grooved stone; (6–7) engraved stone objects; (8–10) chert points, Periods I–VI; (11–13) chert points, Periods III–VI; (14) bone point; (15–17) conical ceramic spindles; (18–19) disc-shaped ceramic and stone spindles.

## *Bone Artifacts*

Bone artifacts are limited in variety and are located in frequency only in Periods I–III. Casal (1961: 230) maintains that the distribution of bone artifacts, particularly pointed objects, covaries with increased utilization of bronze points. The most numerous bone artifacts are hundreds of pointed awl or punch fragments (Fig. 3.34, no. 14). These awls, or punches, were manufactured from the long bones of various animals (sheep/goat?) and were polished from use. The first example is recorded in Period I<sub>1</sub>, reaches its greatest frequency of complete examples in II<sub>3</sub> (88), progressively declines throughout III and becomes rare by IV. Another bone artifact found only in Period I (three examples) was a small polished rectangular piece of bone with several perforations whose function is unknown. Bone spatulas are frequently found in Period III and, unlike the awls or punches, is encountered throughout Period IV. Rare examples of bone tubes were also found in Periods III–IV.

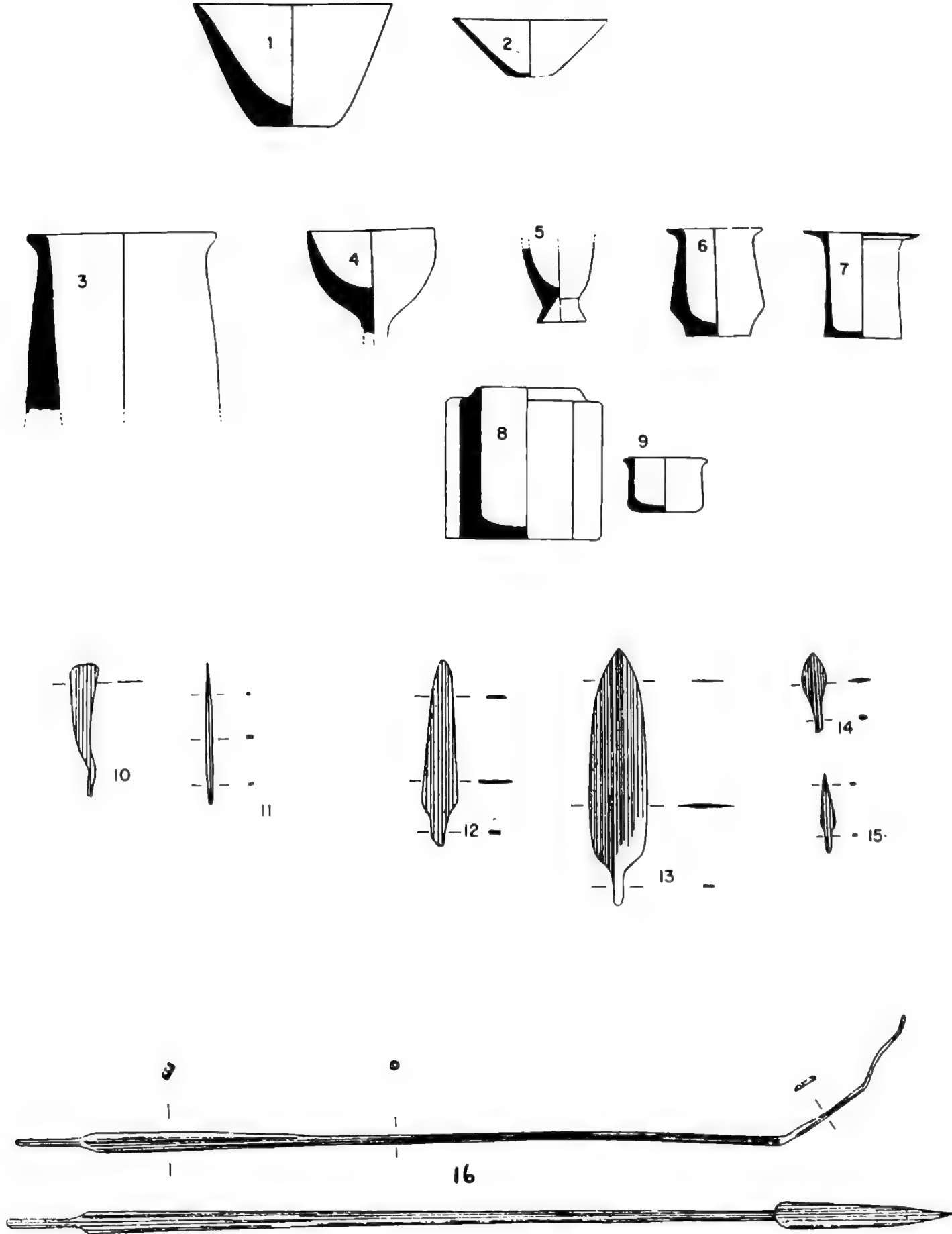
## *Metal Artifacts*

Metal artifacts were first found in Period I<sub>2</sub> and increase in frequency and variety throughout the sequence. The earliest example was a flat blade like instrument which might have had a hafting tang (Fig. 3.35, no. 10). However, the most frequent metal artifact of the entire Mundigak sequence was a simple type of bronze point or punch with a circular cross-section (Fig. 3.35, no. 11). It was first identified in I<sub>4</sub> and is so easily available that it replaces the bone awl/punch in Period IV. A single example of this point/punch was found in Period IV<sub>3</sub>, still hafted into a bone handle confirming its functional designation as a punch. The first example of a true projectile point was identified in Period II<sub>3</sub>, being lanceolate in shape with an elliptical cross-section and the type became increasingly frequent in later periods. (Fig. 3.35, nos 12–13). In Period III a tanged lozenge shaped point was introduced, and in Period IV a tanged oval shaped point. Other possible weapons found in Period IV were a large lance head (Fig. 3.35, no. 16) and knife (sword) (Fig. 3.36, no. 14), but these artifact types were very rare.

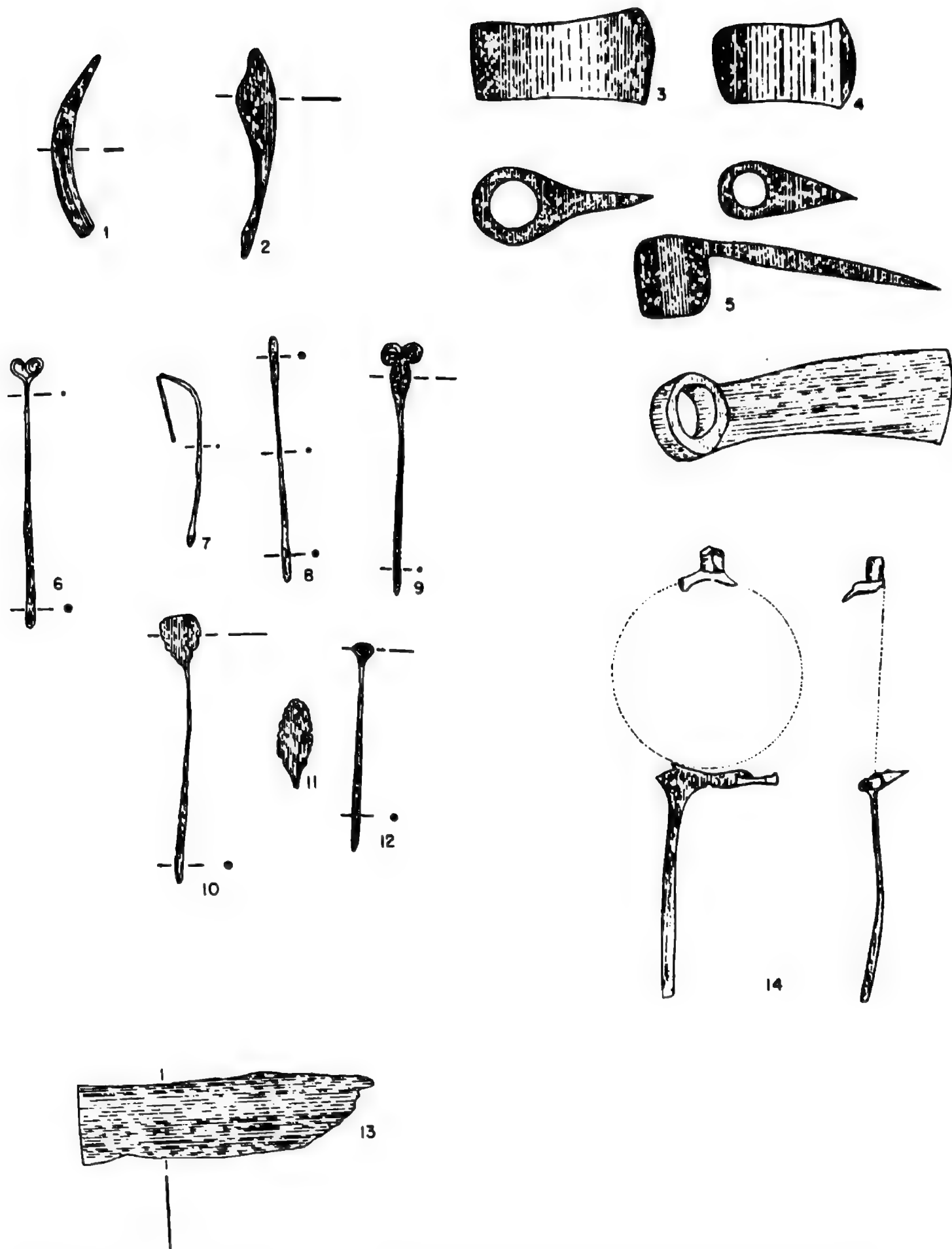
The first examples of “luxury” type metal artifacts were located in Period II<sub>3</sub>. These two artifacts were pins one with a double-volute end while the other had a flattened and perforated end (Fig. 3.36, nos 6–7). Similar pins with flat ends and twisted shafts were also found in Period III (Fig. 3.36, no. 8). However, the greatest number and variety of “luxury” type objects was found in Period IV<sub>1</sub>. Among such objects identified were: concave discs (mirrors) (Fig. 3.36, no. 13); double-volute, lozenge, and broad-flat headed pins (Fig. 3.36, nos 18–20); handles for discs (mirrors); and a buckle. It is important to note that in at least two instances smelted (?) iron decorative buttons were found on objects in Period IV. Frequently encountered utilitarian objects in Period III–IV were small curved knives or sickles (Fig. 3.36, nos 1–2) and chisels, and, only in Period IV, a few barbed hooks. Three important metal artifacts located in Period III<sub>6</sub> were the only examples of socket-hole axes (two) and an adze (Figs 3.36, nos 3–5; 3.38a). Most of the more common utilitarian and “luxury” metal artifacts were also identified in Period V.

Elemental analysis of some of these artifacts indicated some interesting aspects of the metallurgical sophistication represented by these objects. Analysis of one artifact from Period





**Fig. 3.35:** Mundigak: (1-2) stone bowls of common form, Periods I-VI; (3-9) additional forms of stone vessel, Period IV; (10-11) copper or bronze objects, Period I; (12) bronze point, Period III; (13) bronze point, Period IV; (14-15) bronze points, Period V; (16) bronze lance head, Period IV.



**Fig. 3.36:** Mundigak, metal objects: (1-2) bronze sickle blades; (3-5) bronze axes and adze, Period III; (6-7) bronze pins, Period II; (8) bronze pin, Period III; (9-12) bronze pins, Period IV; (13) bronze mirror, Period IV; (14) bronze short sword (?), Period IV.

I<sub>5</sub> demonstrated that it was a very low-tin bronze. Tin accounted for only about 1%, iron 0.15% and the remaining material was copper. Such a composition is a striking contrast to the high tin content of the chronologically earlier material located at Ghar-i-Mar. Of the artifacts subjected to analysis from Period III only the axes and adze had a composition approaching that usually associated with bronze. These artifacts had a tin content of almost 5%, the highest recorded at Mundigak. This contrasts with the composition of other artifacts from this period which is similar to that of Period I. Axes and adzes rely on weight, force and hardness for their efficiency as a tool. Such characteristics are maximized by a high tin content. Other items such as points, pins or knives have different usages requiring different characteristics and this is reflected in their lower tin content. Therefore, by Period III the differential characteristics of various alloying compositions had been recognized and metallurgy was entering, or had entered, into a new phase of sophistication and presumably specialization. During Period IV the tin content of such items as pins increases slightly (1.5%) and traces of lead (1.6%) and other elements are found.

### *Small Miscellaneous Artifacts*

*Spindle Whorls.* During Periods I<sub>4</sub>–II two types of ceramic spindle whorls were found. The most frequent type was a cone shape (Fig. 3.34, no. 15) and the other was a truncated cone shape (Fig. 3.34, nos 16–17). Both types had a central perforation. In Period III both of these conical types decrease in frequency and from III<sub>5</sub>–V they are replaced by ceramic and stone (steatite) disc shaped whorls (Fig. 3.34, nos 18–19).

*Stone Vessels.* The predominant type of stone vessel is the simple bowl with straight-angular walls manufactured from alabaster (Figs. 3.35, nos 1–2; 3.36a). It was first recorded in I<sub>2</sub>, increased in frequency in III<sub>6</sub>, and was located in even greater quantity during Period IV. There was also during Period IV a significant increase in the variety of vessel forms (Fig. 3.35, nos 3–9) including: small beakers with straight and carinated sides; bowls with curving sides; pedestal bowls/goblets; bowls with short vertical sides; pentagonal canisters, and stemmed goblets. Many examples were found with geometric motifs similar to that found on the pottery engraved on the sides. White veined marble was also used in the manufacture of these later varieties.

*Beads-Pendants.* Only a limited number of beads were found in Periods I<sub>3</sub>–II. Most of the shapes identified for these early periods will persist throughout the sequence and included: simple discs; tubular; trapezoidal; cylindrical; biconical; and lozenge. The material of manufacture included the following types of stones: various types of siliceous white limestone; shell; lapis lazuli (3); jade (?); blue stone (turquoise?); black or grey stone (steatite?); carnelian (2); quartzite; and pottery. Period III witnessed a significant quantitative increase in such beads half of which were in association with the burials of Period III<sub>6</sub>, and most of the remaining examples were also located in a III<sub>6</sub> provenance. Predominantly the beads of this period were manufactured from steatite (11), quartzite (13), siliceous limestone, and a few of lapis lazuli (4). The most prolific period for beads was IV, and particularly IV<sub>1</sub>. Besides already-existing shapes the following new ones were identified: small biconical, multifaceted biconical, eight-point star, truncated cone, rectangular with



Fig. 3.37: Mundigak: (a) alabaster bowls; (b) stone saddle querns; (c) pestles and mortars.



Fig. 3.38: Mundigak, objects of copper or bronze: (a) axes and adze of bronze; copper or bronze knife with bone handle.

elliptical cross-section, oval with star cross-section, and irregular. Among materials of manufacture significant quantitative increases could be determined for lapis lazuli, carnelian and shell. Inlaid beads occur for the first time, represented by a single rectangular carnelian bead with a figure 8 in white. Bronze beads are also encountered for the first time in the form of a simple tube and one small bell with an iron ball in the centre. Similar beads (except lapis lazuli) can be identified for Period V but in less quantities.

*Seals* (Fig. 3.40a, b). A single example of a compartmented seal with geometric motifs made from steatite was found in Period II<sub>2</sub>. Such seals underwent a dramatic frequency increase in III<sub>6</sub> (30) although infrequently found in the earlier phases of that period (III<sub>4</sub> = 2, III<sub>5</sub> = 3). The majority of these seals were rectangular with two central perforations. Identical seals made from bone were also found in III<sub>5</sub> (1) and III<sub>6</sub> (3). Yet another significant increase in seals occurs in Period IV which is also distinguished by the introduction several new geometric shapes of seals. The most noticeable addition is of notched edges encompassing the seal circumference. Metal seals were found in the last phases of Period IV but were rare, and one had a zoomorphic motif. Only a single compartmented seal was identified as belonging to Period V.

*Ceramic Figurines* (Fig. 3.39). Only four figurines of humped bulls were found in Period I<sub>3,5</sub>. Casal states that such figurines increase in frequency during Period II but no quantification is given. A single example of an anthropomorphic figurine was found in Period II. This is a crudely modelled human torso of indeterminate sex. Both zoomorphic and anthropomorphic figurines are numerous represented in Period III. Bull figurines are particularly numerous in the early phases of this period (III<sub>1</sub> = 71) but then progressively decline in the later phases (III<sub>6</sub> = 30). Also found in III<sub>1</sub> were two figurines resembling goats. A similar increase can be defined for the anthropomorphic figurines. Unfortunately, Casal gives no actual counts but refers to their frequency as being abundant (III<sub>1</sub> = 15). These figurines were predominantly females with prominent breasts. All figurines are highly stylized in a standing position. Arms are represented by mere wing-like projections while the lower portions are distinguished by broad flat hips. The body below the hips was not modelled at all. A single figurine had some punctated motifs in the neck region which presumably represented a necklace.

Period IV was the final occurrence of figurines in any significant quantity. Two important points need to be made about Period IV figurines. First, considering the horizontal area of excavations in contrast to that of previous periods the quantity of figurines seems very small. It appears that such figurines were actually less frequently made than in earlier periods. Second, according to available information, these figurines were conspicuously absent from both the "palace" and "temple" structures. Figurines were confined to the habitation areas surrounding the enclosure walls, or in the same contexts as they were located in the previous periods. Most zoomorphic figurines were highly stylized representations of the humped bull/cow. Several were found with painted decorations, including polychrome, or an applique collar. A few figurines represent caprids such as sheep/goat or ibex and a single figurine of a pig. Anthropomorphic figurines were predominantly female. A notable exception is a sculptured in the round male figurine decorated with polychrome paint. Most female figurines are highly stylized with pinched faces, prominent breasts, applique eyes, winged arms, broad hips, and otherwise a rather flat profile. Appliqué and painted necklaces





Fig. 3.39(a): Mundigak, terracotta figurines of cattle, various periods.



Fig. 3.39(b): Mundigak, terracotta human figurines, various periods.





Fig. 3.40(a): Mundigak, stone button seals.



Fig. 3.40(b): Mundigak, copper button seals.



**Fig. 3.40(c):** Mundigak, Head of white limestone, Period IV<sub>3</sub>.

and coiffures are recorded on many examples. All figurines are standing with one exception which has its legs crossed and extended out in front apparently to act as a support. Two very fine examples of female figurines modelled in the round in a style usually referred to as “Zhob” figurines were located in Period IV. Only the upper torso was found but such figurines are usually depicted as seated when found at other sites. In contrast to Period IV only a single female figurine was found in Period V.

### *Faunal and Floral Remains*

Domesticated animals were identified initially in Period I and included: sheep, goat, cattle, ass, horse and dog. Wild animals were represented by: gazelle, ibex and lynx. Period II had the same complex of domesticated and wild animals with the addition of a wild bird of prey. More important, the first cereal remains identified at Mundigak come from this period and they included domesticated wheat (*Triticum compactum*). The faunal remains in later periods include the same animals but no plant remains were identified for the later periods, it is however clear that the inhabitants of Mundigak were exploiting domesticated plants and animals from the initial occupation of the site.

## Said Qala Tepe

Said Qala Tepe is located approximately 60 miles southeast of Mundigak near Kandahar City. This site is not comparable to Mundigak in terms of its absolute size (8 m of elevation and 200

m in diameter), areal extent of excavations (two 10 m squares and a 6 × 2 m sondage), or extensiveness of the cultural sequence (all occupations correspond to Mundigak III<sub>5</sub> IV<sub>1</sub>), but the excavations at Said Qala utilized more careful methods of artifact retrieval and emphasized quantitative analysis of those artifacts to a much greater degree than the Mundigak excavations. The site was first tested by Fairservis (1952), however, the major excavations were conducted by the author almost 20 years later (Shaffer, 1971, 1972); this discussion differs from previous reports on these excavations, principally in that previous reports retained the field designations for major occupations which were numbered from top to bottom, whereas here major occupations will be numbered from the bottom to reflect the site sequence. Three C-14 dates and four years of hindsight have also significantly altered my original interpretation.

### *Stratigraphy and Architecture*

The initial occupation at the site, Period I, is known only from the lowest 3 m of deposits in the sondage (Fig. 3.41). These deposits are characterized by several layers and lenses of differential soil depositions which can be distinguished on the basis of different colours, textures and cultural content. Although different these depositions indicate continuous occupation throughout this period, and analysis of the associate artifacts adds validity to grouping these deposits into a single occupation. The limited areal extent of the sondage precludes any definitive statements being made about architectural characteristics of this period. However, it does appear that simple rectangular structures of mud brick were constructed.

Period II is likewise primarily known only from the sondage although a final occupational phase was delineated in the other excavations. The outstanding feature of this period was the construction of a large mud brick wall of unknown function. Previous deposits of Period I were levelled in preparing the area for construction of the wall. The wall was constructed entirely of mud brick and clay fill. After levelling a very wide wall (3.3 + m and estimated up to 6 m) was constructed of solid mud brick up to a height of 80 cm. At this height two separate wall faces were constructed of mud brick (1.5 m thick) up to a height of at least 3 + m. The area between these two walls was filled with undifferentiated clay free of any cultural debris. Only the south face of this wall was recovered in the excavations and there is no indication as to its function or overall shape. Several layers and lenses of differentiated clay soils abut against the south face, and the remains of at least one mud brick structure can be determined. These deposits are then sealed by a significant amount of wall fall from this wall providing a stratigraphic boundary between Periods II and III. Additional structures from this period were located in the other excavated area. Two large trapezoidal mud brick structures with lateral entrances were separated by a large open space from series of small rectangular room structures (Fig. 3.42). These small rooms had several common walls and a rather haphazard arrangement. The most distinctive feature located in these rooms was a large rectangular interior oven constructed from mud bricks and abutted against the wall. This feature had an interior clay-lined firepit with a long narrow trench providing access to the interior firepit from outside the oven. Such a trench might have functioned as a bellows providing oxygen to

West Wall

North Wall

East Wall

Periods Depth

VI 0 - m

IV & V

III 1 - m

II 2 - m

3 - m

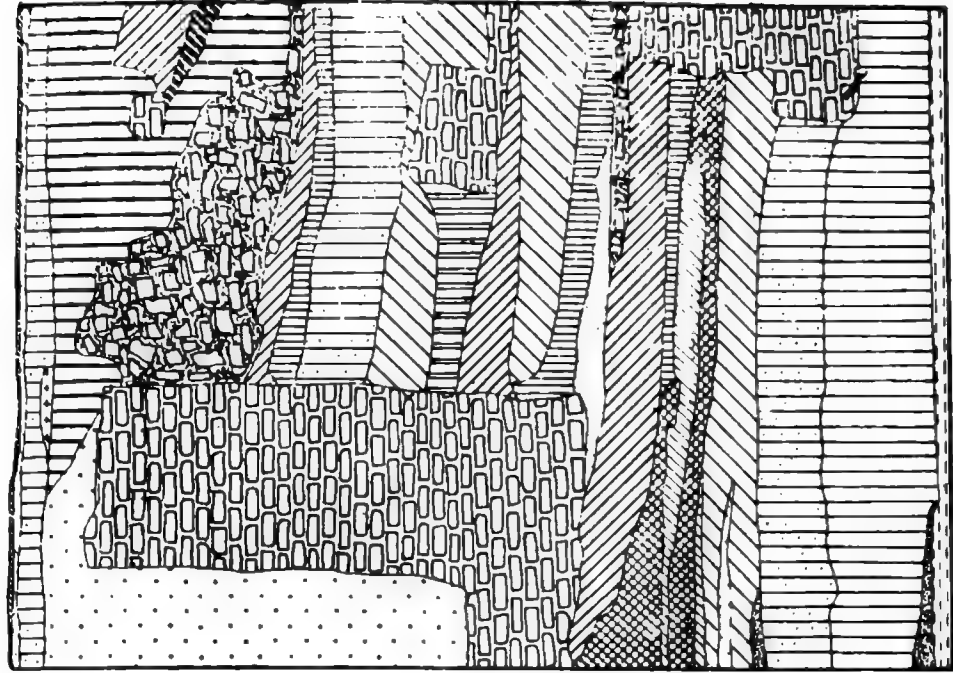
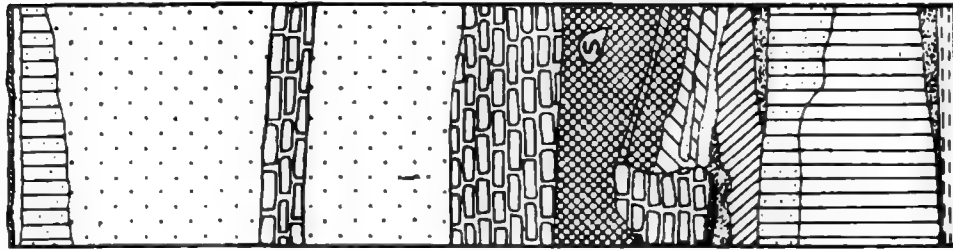
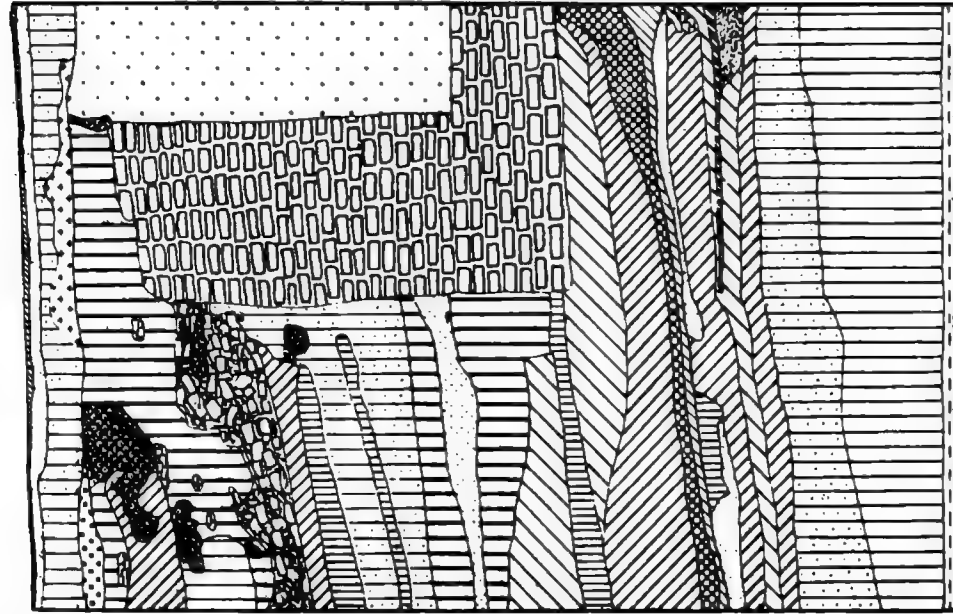
4 - m

5 - m

6 - m

7 - m

8 - m



FRUIT DRYING SURFACE

LOESS

BROWN CLAY WITH CULTURAL FILL

GREEN GLEYED SOIL

LIGHT BROWN HARD CLAY

BROWN CLAY WITH CHARCOAL

LENSED CLAY AND CHARCOAL

MUD BRICK WALL FALL

BURNED CLAY

UNDIFFERENTIATED AND CLEAN TAN CLAY

MIDDEN

BROWN CLAY AND MIDDEN

TAN CLAY AND CHARCOAL

DENSE ASH/CHARCOAL WITH MIDDEN

YELLOW CLAY WITH LIMITED CULTURAL MATERIAL

YELLOW CLAY WITH CULTURAL MATERIAL

CLAY WITH CHARCOAL DEPOSITS

BROWN CLAY

WATER-TABLE (FEB 1971)

STONE

ANIMAL BURROW

MISCELLANEOUS MUDBRICK

MUDBRICK WALLS

ORANGE CLAY WITH CHARCOAL

LOOSELY COMPACTED BROWN CLAY WITH CULTURAL MATERIAL



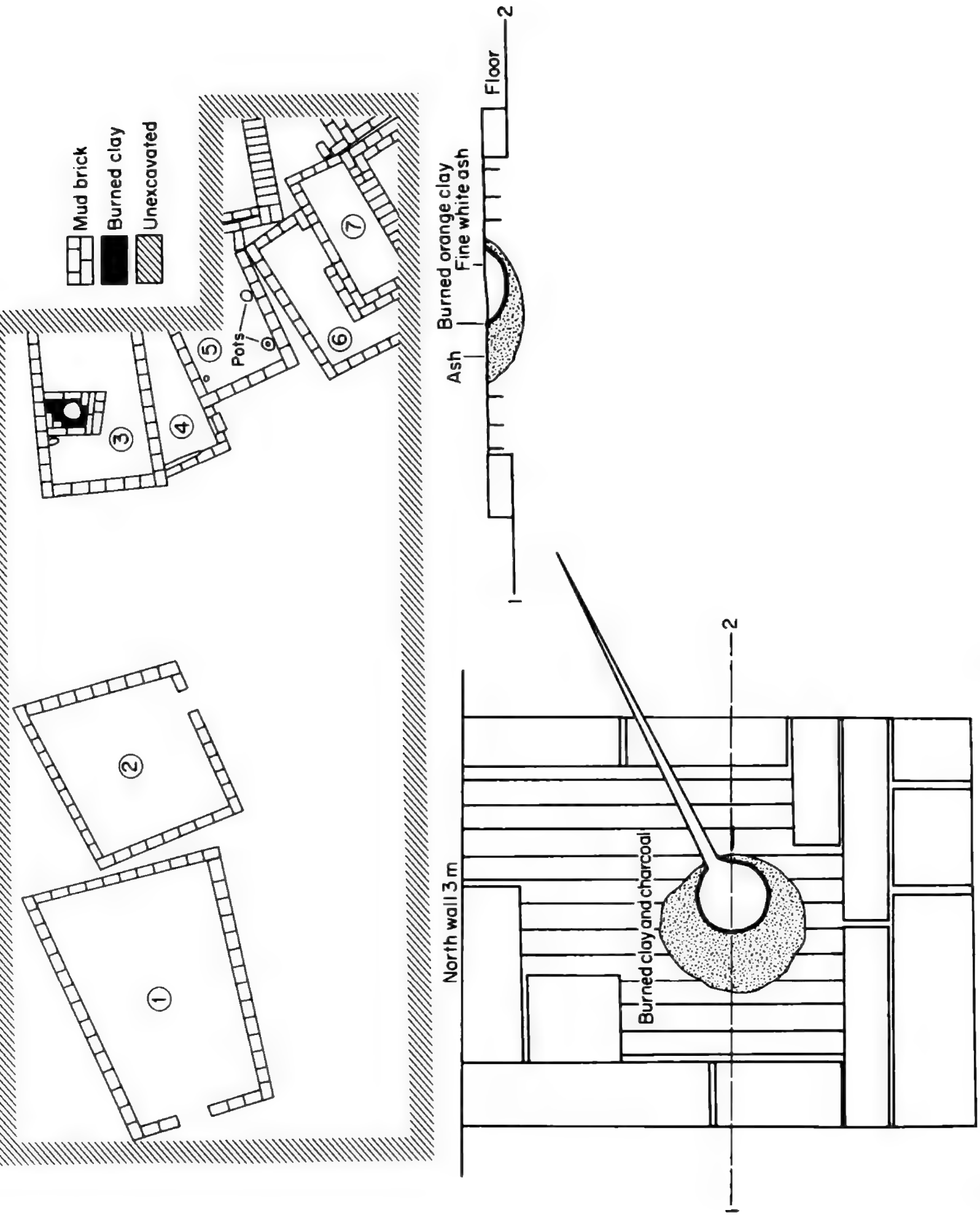


Fig. 2.42. S.14 Oak, example of architecture, Period II



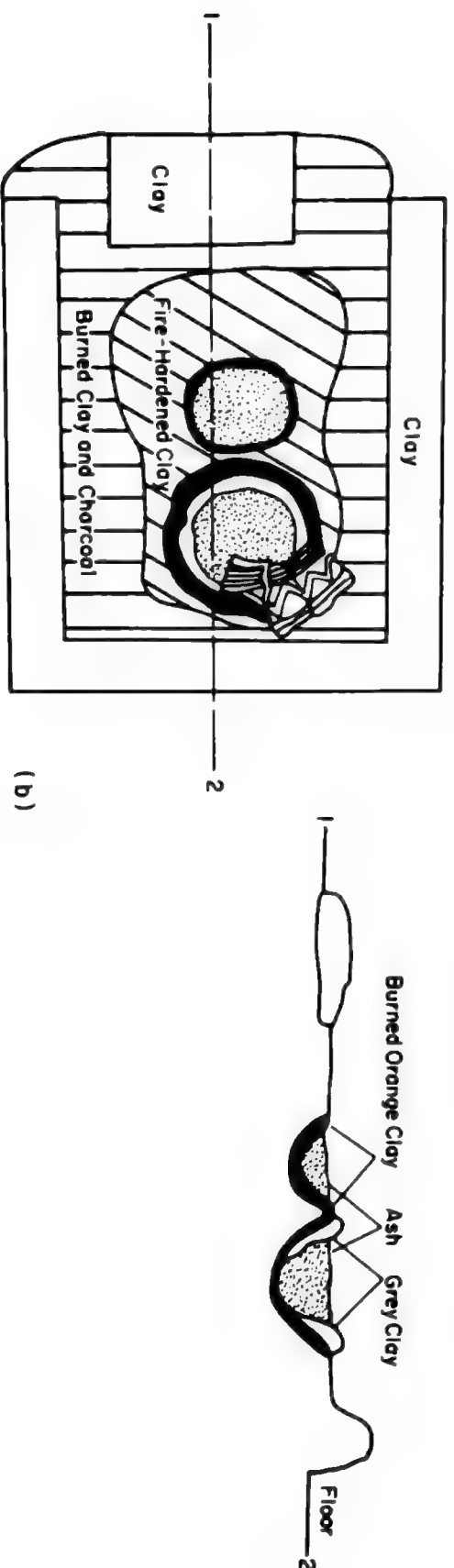
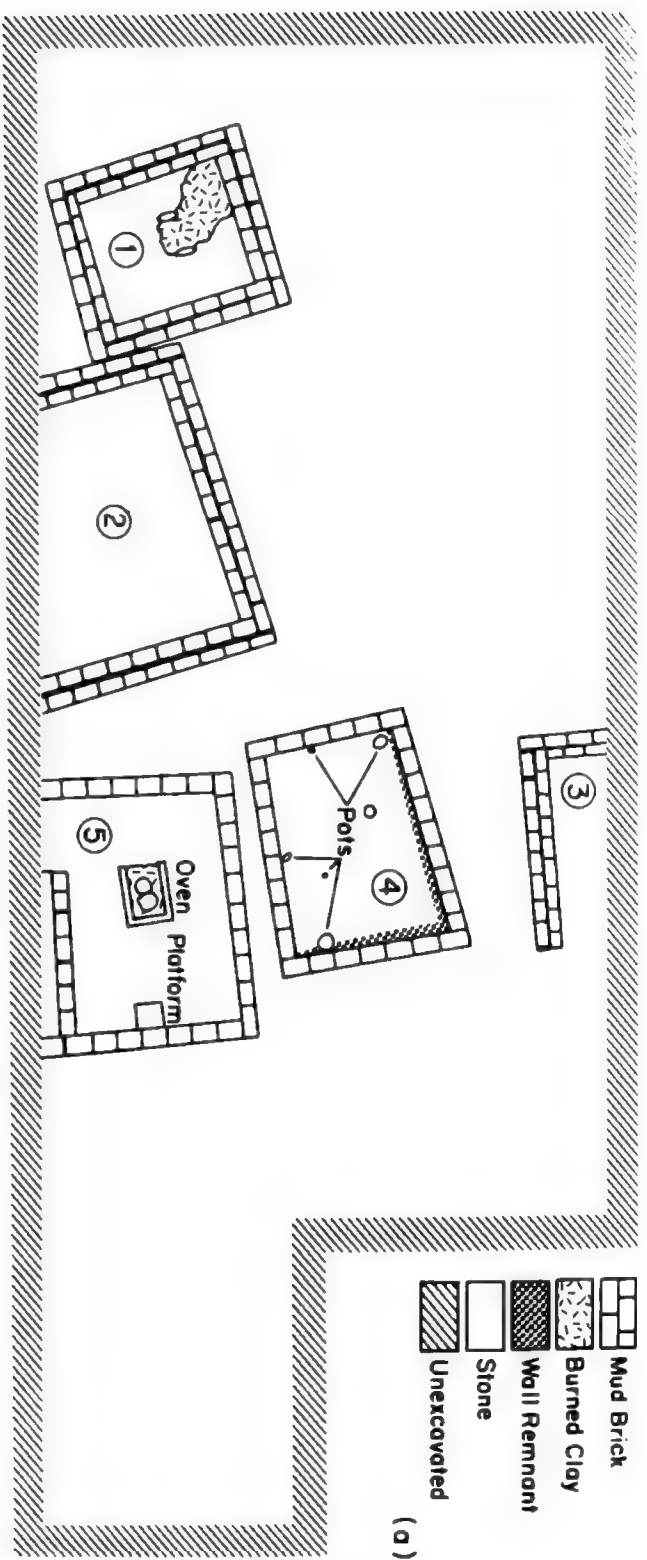


Fig. 3.43: Said Qala, (a) example of architecture, Period III; (b) oven from above structure (note "linear style" Quetta black-on-buff sherd).

the fire. Judging from the stratigraphic position of these structures they must represent a final occupational phase of Period II.

The final major prehistoric occupation at the site, Period III, was located in both excavation units. In the sondage it consisted of a series of differentiated deposits sandwiched between the wall fall and a depositional layer which contained Kushano-Sasanian pottery and correlated with the large cemetery of that period located in the other excavations (Shaffer and Hoffman, 1971; n.d.). Excavations outside of the sondage indicated that at least four phases of occupation could be determined for this period (IIIA–D). The first three phases represented continuous building and rebuilding of small rectangular mud brick structures similar to those found at Mundigak III (Fig. 3.43). Walls were constructed with both single and double coursed mud brick and only rarely were entrances definable. Several structures had interior ovens similar to those found at Mundigak while others only had a simple clay-lined firepit. A single structure in IIIA had two milling stone fragments set into the floor with a centrally located groove on the upper edge. Between these two stones were extensive ash and bone deposits suggesting that it represents a spit-roast. In IIIC some of these structures had their walls founded in a trench with the first few wall courses being headers with the remaining wall constructed of stretchers. The final occupation, IIID, was represented by a series of small mud brick and *pisé* structures which appeared to function as storage bins or work areas but were not related to any habitation structures. Also located in this final phase were several extremely large rubbish pits. The areas of the site tested were not occupied after this period until utilization as a cemetery by a much later Kushano-Sasanian group. However, it is possible that other areas of the site, or around the site, continued to be occupied as the cemetery cuts through a deposition layer that contains extensive prehistoric ceramics but no occupational features. The ceramics from this level have been analysed under the designation of Period IV while the cemetery constitutes Period V and the modern surface of the mound Period VI.

## *Chronology*

Three C-14 dates have been processed from the site, each from a different period. The MASCA corrected dates are: Period I = 2110 B.C.; Period II = 2160 B.C.; and, Period III = 2230 B.C. A possibility of ground water contamination was noted by the processing laboratory making the absolute dates somewhat suspect. However, it is important to note that all three dates are basically contemporary, i.e. end of the third millennium B.C. Such contemporaneity corresponds with the type of cultural material recovered which indicates that all occupations at Said Qala are essentially equatable with those of Mundigak Period III<sub>5-6</sub> IV<sub>1</sub>.

## *Ceramics*

Period I ceramics are known only from the sondage. Here, as at Mundigak, the useful dichotomy of handmade and wheelmade potteries is made to facilitate description and analysis. The paste for all the ceramics at Said Qala is essentially the same as was encountered at Mundigak, being a buff-red in colour and self- or sand-tempered with a few noted

exceptions. Two varieties of handmade pottery can be distinguished on the basis of surface treatment, although both have chaff tempering and the same vessel forms as those described for Mundigak handmade pottery. The most frequent type had a basket-impressed surface while the other was simply smoothed. Together these handmade potteries accounted for less than 2%, of Period I pottery. Wheelmade pottery was identical, in terms of varieties and vessel forms, to that described for Mundigak III. The decorated varieties had a relative frequency of about 3%, with the same, but more limited, variety of motifs. Only rarely were a few sherds of Quetta Ware found. A few sherds of a black-on-red slipped pottery, called Kile Gul Mohammad after a type in the Quetta valley (Fairservis, 1956), and Faiz Mohammad Greyware (Fig. 3.46, no. 1) from the same area were also found.

Period II is known from both excavation areas, as are all subsequent periods. Major ceramic changes are confined almost entirely to the handmade potteries. There is a major

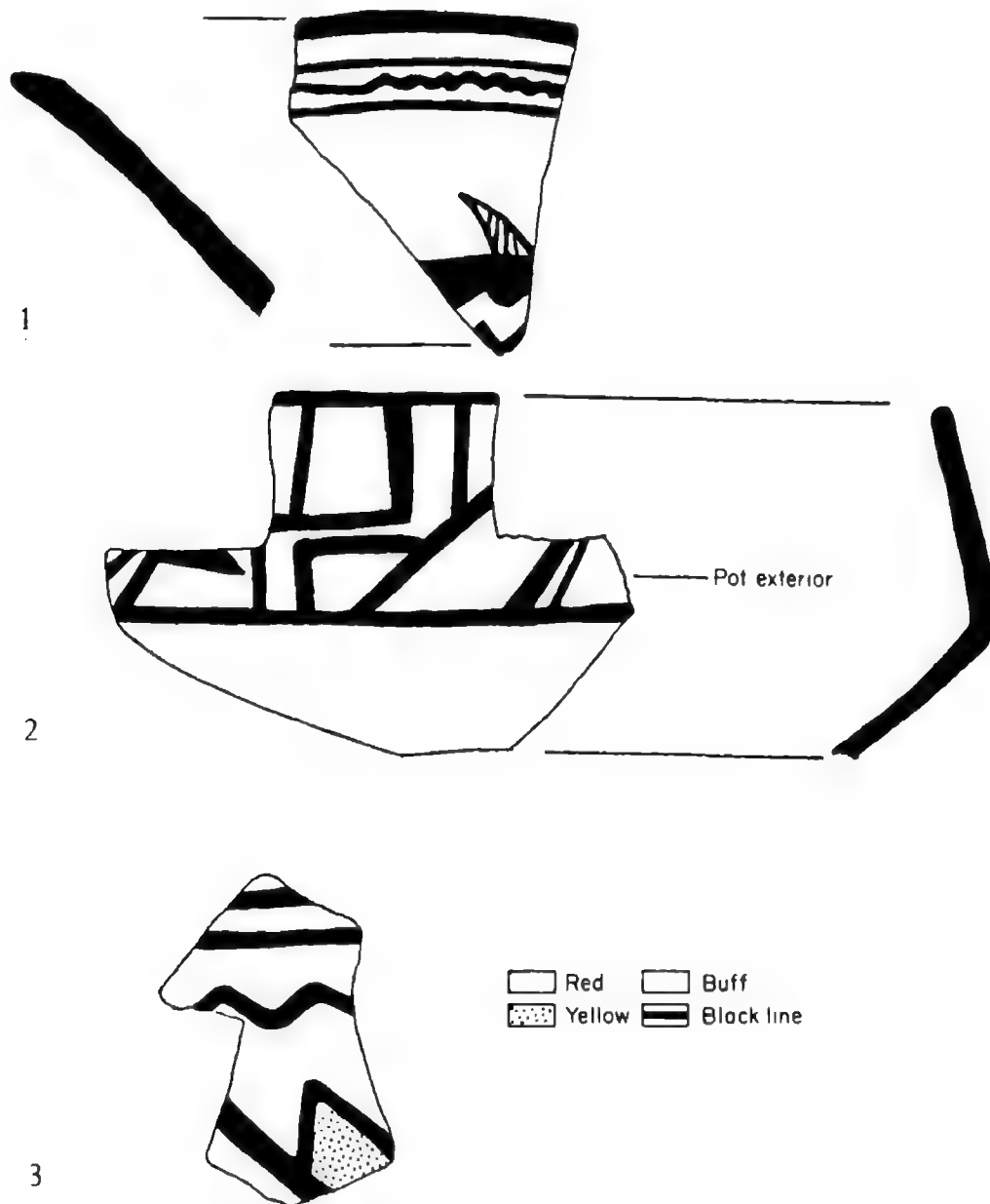
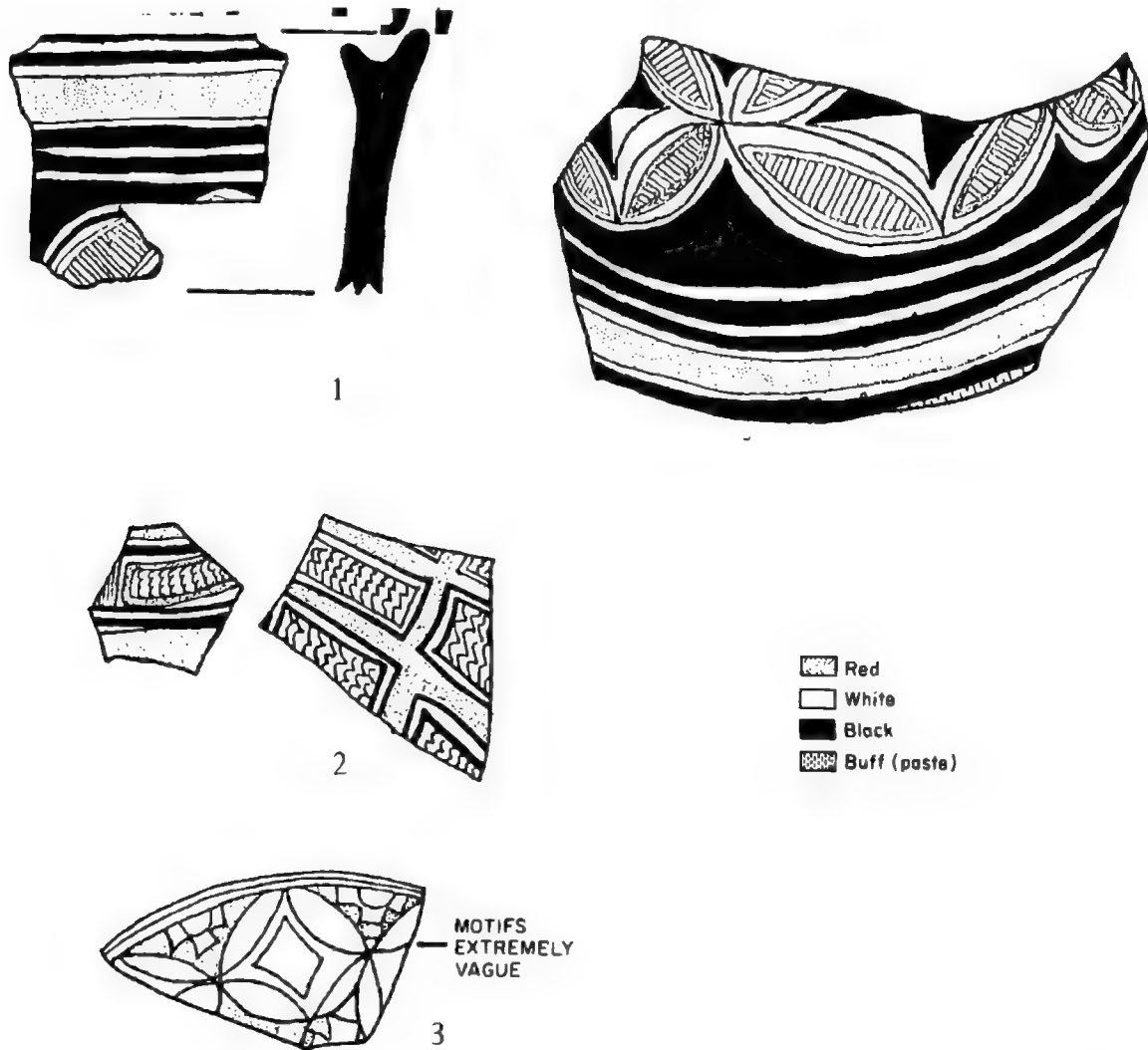
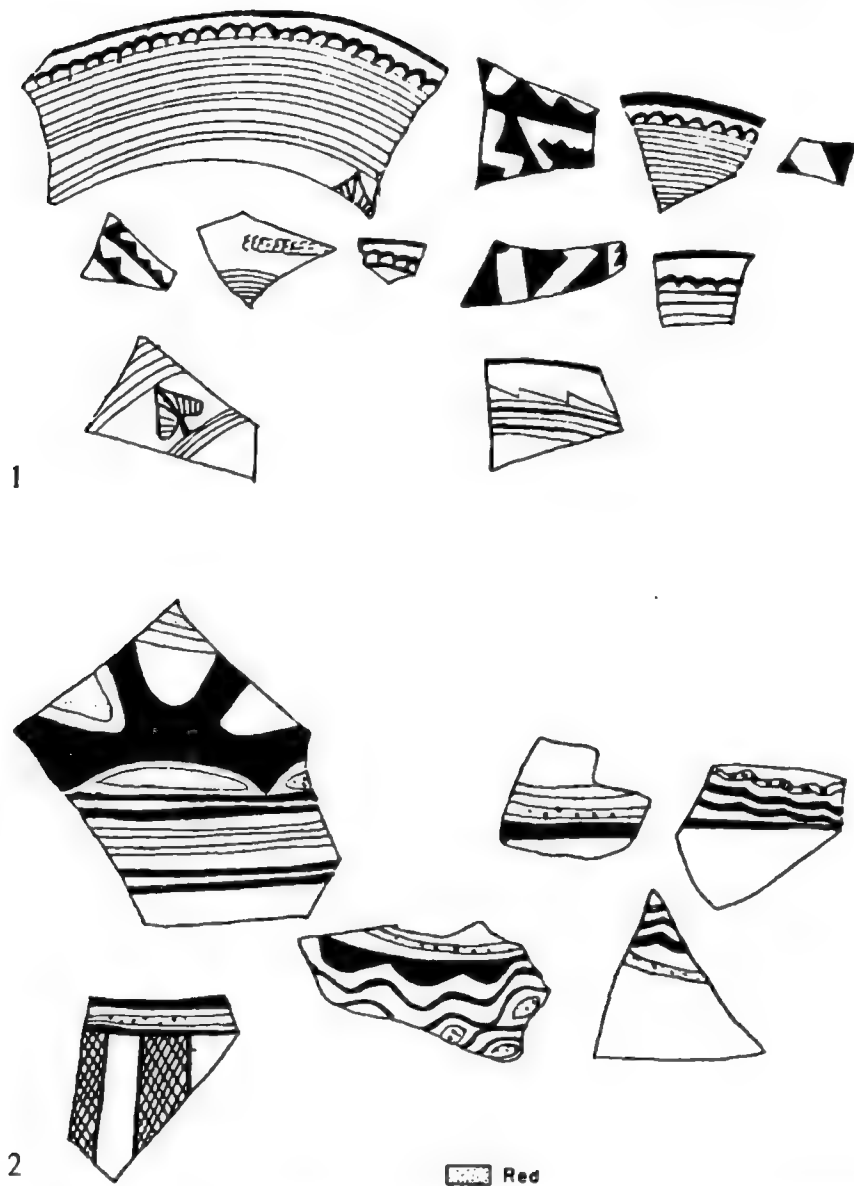


Fig. 3.44: Said Qala, intrusive or special function sherds: (1-2) Nal style, black-on-buff pottery; (3) Nal style polychrome sherd.

increase in the relative frequency of these types jumping to almost 40% in the sondage and about 10% in the habitation area (which is probably more representative). Moreover, the variant with the smoothed surface is the predominant type with only rare sherds of the basket-impressed variety being found. Equally rare were sherds of a handmade pottery with crushed rock tempering (Quetta Slate Temper, Fairservis, 1956: 250). There were no changes in associated vessel forms as these remain constant throughout the sequence for handmade pottery. Among the wheelmade potteries there was little noticeable change. The decorated varieties now represented about 10% of the total pottery, a frequency which remains relatively constant throughout the rest of the sequence. The larger sample from the habitation area indicates that most of the motifs described for Mundigak III pottery are present at Said Qala. Quetta Ware reaches a frequency of about 1% which will also remain constant throughout the sequence. Several new types of special function or intrusive pottery can be added to the two already listed in Period I. These new types (Figs 3.44–3.46) come primarily from the habitation area and include: Quetta Wet Variants; Kechi Beg white-on-dark slip (Fairservis, 1956: 257–9); Kechi Beg Polychrome/Bichrome (1956: 259); Amri Polychrome (Casal, 1964: 85); Nal black-on-buff (Hargreaves, 1929: 35); and a few sherds resembling the



**Fig. 3.45:** Said Qala, intrusive or special function sherds; (1) Amri style polychrome; (2) Gumla style polychrome; (3) Amri (?) style polychrome pot lid.



**Fig. 3.46:** Said Qala, intrusive or special function pottery: (1) Faiz Mohammad red or black on greyware; (2) Kechi Beg or Gumla (?) style bichrome ware.

polychromes from Gumla III (Dani, 1970–71). Each variety was represented only by a very few sherds.

The last prehistoric occupations, Periods III–IV, will be discussed together since the detectable changes represent a continuum between the two. Handmade pottery decreases in the frequency of the crushed rock tempered variety. It is interesting to note that this latter variety was never identified in the sondage. Among wheelmade potteries vessel form changes occur which parallel those of Mundigak III<sub>5</sub>–IV<sub>1</sub>. Bowls change from angular-wall to an S-shaped wall form. Jars are predominantly globular with collars. Beakers change from a parallel wall to an S-shaped wall profile. A few stemmed vessel forms are recorded but never the small pedestal-based beaker with flaring or carinated walls that was found in Mundigak IV<sub>1</sub>. Similar geometric motifs are identifiable on Said Qala III–IV and Mundigak III<sub>5</sub>–IV<sub>1</sub> pottery. Although floral motifs are found on Said Qala pottery zoomorphic motifs were completely absent. Likewise the Quetta Ware motifs are more similar to those identified in a



Mundigak III<sub>5-6</sub> context than in IV<sub>1</sub>. These latter factors argue for a more close correlation between the ceramics of Said Qala III–IV and Mundigak III<sub>5-6</sub> than IV<sub>1</sub>, but these boundaries are very elusive. The only significant addition to the special function or intrusive type category is a single sherd of Nal Polychrome (Fig. 3.44, no.3). Overall the ceramics at Said Qala support the ascription of all prehistoric occupations at the site as being contemporary with those of Mundigak III<sub>5-6</sub>–IV<sub>1</sub>.

### *Lithic Artifacts*

The lithics at Said Qala are not very different from those identified at Mundigak except perhaps in the more limited nature of the types of artifact found. Milling and handstones similar in all respects to those at Mundigak were found throughout the sequence. Likewise large cortex flakes with one or more retouched edges and demonstrating extensive use as knives or scrapers were found in all occupations. It is interesting to note, however, that these lithic artifacts begin to co-vary with similarly retouched and utilized pottery sherds in the last occupations (Periods IIID–IV). Flint artifacts were noticeable by their absence. Only a few waste flakes were found in the lower sondage levels and seven blade fragments from the habitation areas (Periods II–IV). Except for one trapezoidal example they were all triangular in cross-section. All specimens were fragments of whole blades so it is impossible to determine the presence of microblades. The complete absence of any flint points is an interesting contrast to the situation recorded at Mundigak.

Other interesting lithic artifacts found throughout the Said Qala sequence included the following: a large trapezoidal-triangular hoe (Fig. 3.47) was manufactured from extremely large cortex flakes of basaltic material. Extensive retouching could be located on all edges but mostly along the base (butt area), and the upper sides where concave to facilitate hafting.

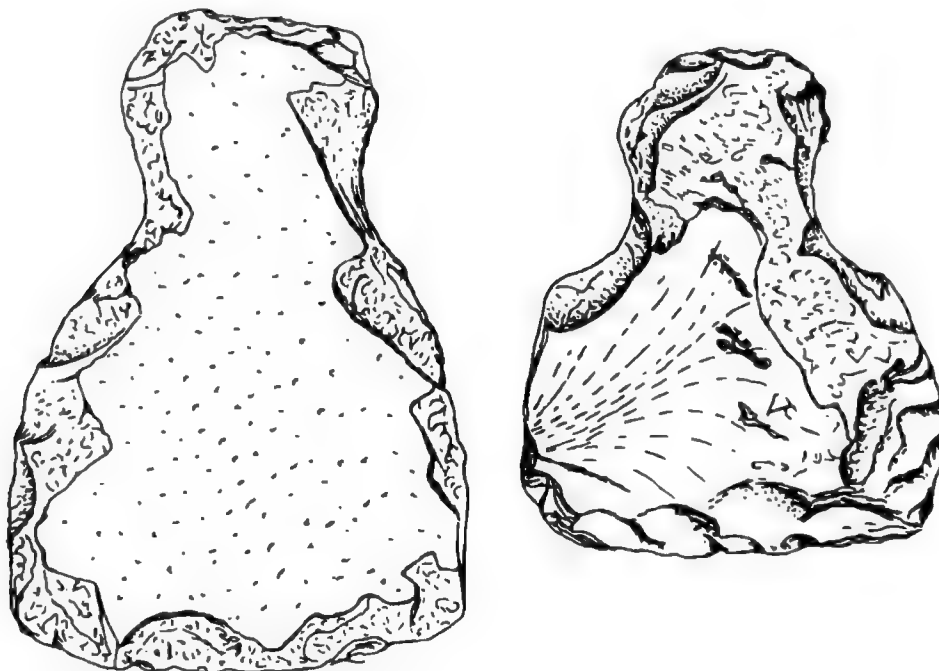


Fig. 3.47: Said Qala: examples of stone hoes.

Often the basal edge was well polished through use. Although infrequent, these artifacts were recorded from all prehistoric periods at the site. Another interesting artifact located only in the habitation areas was a large "cleaver" type object made from basaltic rocks. These infrequent artifacts were bifacially retouched to a blunt cutting-crushing edge and were not hafted. Finally, there occurred at Said Qala in the habitation areas several examples (29) of small hammerstones (never greater than 10 cm in any dimension) made from lumps of natural iron ore.

### *Bone Artifacts*

Bone artifacts are limited in variety and located in a rather constant frequency throughout Periods I-IV. As at Mundigak the most numerous types of artifacts are simple point and awl fragments with complete examples being rather rare. A few other types of bone artifacts are noted under various small miscellaneous artifact categories.

### *Metal Artifacts*

Bronze artifacts are confined to the latest prehistoric occupations (end of Period II-IV) and were located predominantly in the habitation areas. Identifiable functional artifacts included: sickles (Fig. 3.48, nos 1-2), blade fragments (?), a lanceolate or lozenge tanged point, and a point or punch with circular cross-section. "Luxury" items in the form of pins were found in Periods II-IV. Although most examples were fragmentary the following styles could be identified: double volute head (Fig. 3.48, no. 5); flattened with forked end (Fig. 3.48, no. 6); and a simple forked end with twisted haft (Fig. 3.48, no. 4). A single example of a bronze handle (?) fragment with a rounded and perforated distal end was found (Fig. 3.48, no. 3). In general the artifacts are very similar to those found in Mundigak III.

### *Small Miscellaneous Artifacts*

*Spindle whorls.* A truncated cone-shaped ceramic spindle-whorl with central perforation was found throughout the prehistoric periods. Rarely, these had an incised or painted motif. Perhaps somewhat more frequent were simple disc shaped whorls made from pottery or stone (steatite and more rarely alabaster).

*Stone Vessels.* Several fragments of straight-angular walled bowls made from alabaster were found in the final occupation of Period II through to Period IV. Only two variants were found: one was a small shallow oval bowl made from white limestone; and a rectangular vessel leg (?) with square cross-section also made from limestone.

*Beads-Pendants.* Only a limited number of beads were found and these were only in the habitation areas (II-IV). The only shapes identified were: simple discs; cylindrical; biconical; and circular. Materials of manufacture included: steatite, alabaster, marble, amber (?), carnelian, rock crystal, lapis lazuli (two examples); and ceramic. Pendants were very rare. Two rectangular pendants were found (alabaster and bone); and one oval with serrated edges made from turquoise.

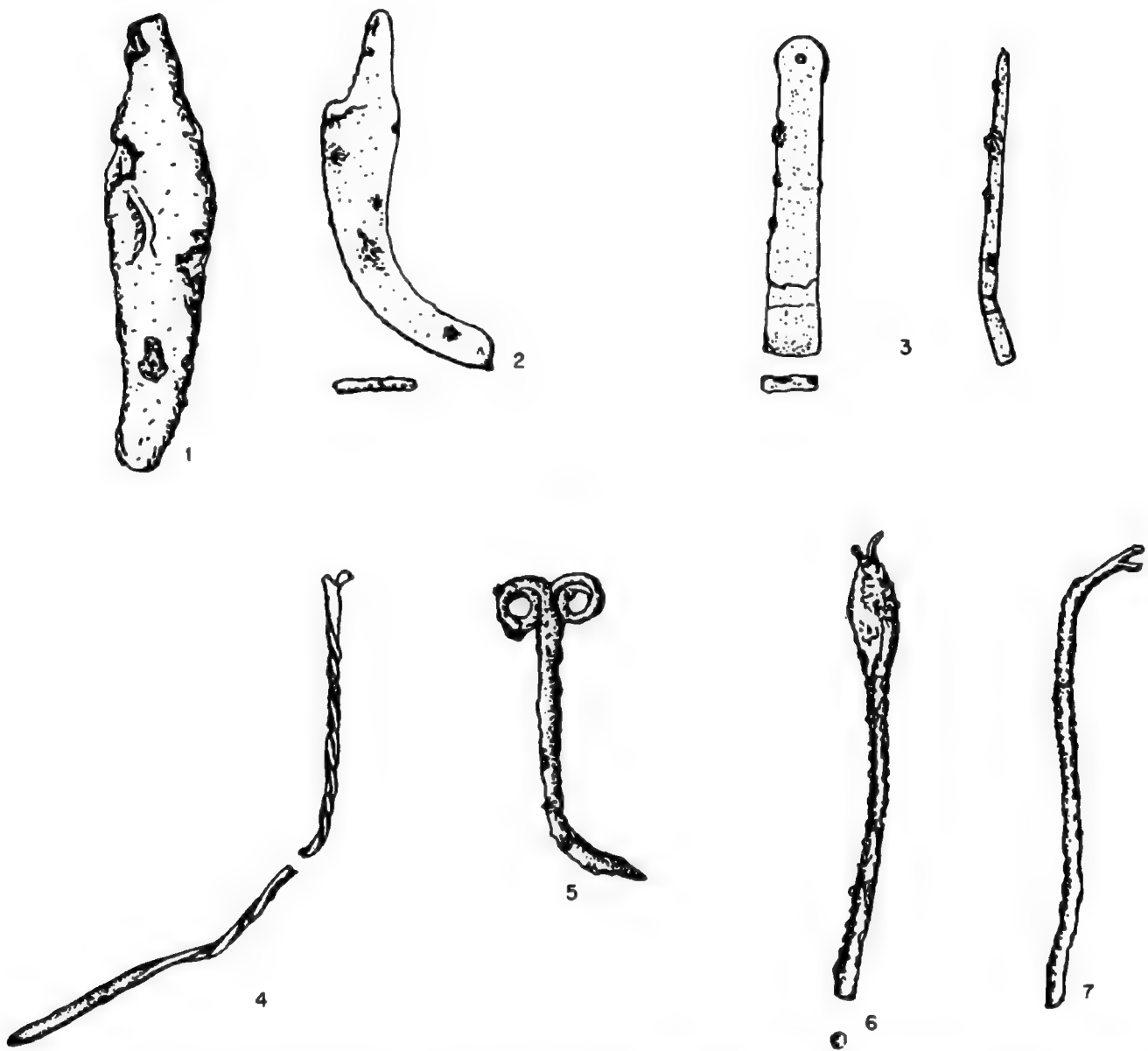


Fig. 3.48: Said Qala, metal objects: (1–2) bronze sickle blades; (3) bronze handle; (4–7) bronze pins.

*Seals.* Several examples of compartmented geometric seals were found all within the habitation area. Only three examples were not made from steatite and these were manufactured from bone and a grey-brown silicious stone. All had two central perforations and were predominantly rectangular or square. Other shapes identified were: circular, triangular, lozenge and oval. One example had deeply serrated edges. Several examples of worked steatite were found which must have represented blanks for the manufacture of such seals.

*Ceramic Figurines.* Bull or cow figurines are found throughout Periods I to IV with the majority of examples coming from the habitation areas (Fig. 3.49, no. 4). These figurines are similar to the same types located at Mundigak. One fragmentary example is of particular note because of its size. Only the forward half was found but this fragment was 13 cm long and stood 13 cm high and had faint red painted motifs. In its complete form this figurine was approximately four times larger than the usual bull type. A single example of a possible bird figurine was also found (Fig. 3.49, no. 3).

Except for one questionable example from Period II in the sondage all the anthropomorphic figurines were found in the habitation area. Moreover, out of the twelve examples all except three (two: Period IV; one: Period III) were associated with the final occupation phase determined for Period II. All examples were fragmentary and confined to the lower torso. Even with such a limited sample it is obvious that the Said Qala figurines are markedly dissimilar to those found at Mundigak. The most common figurine type had the

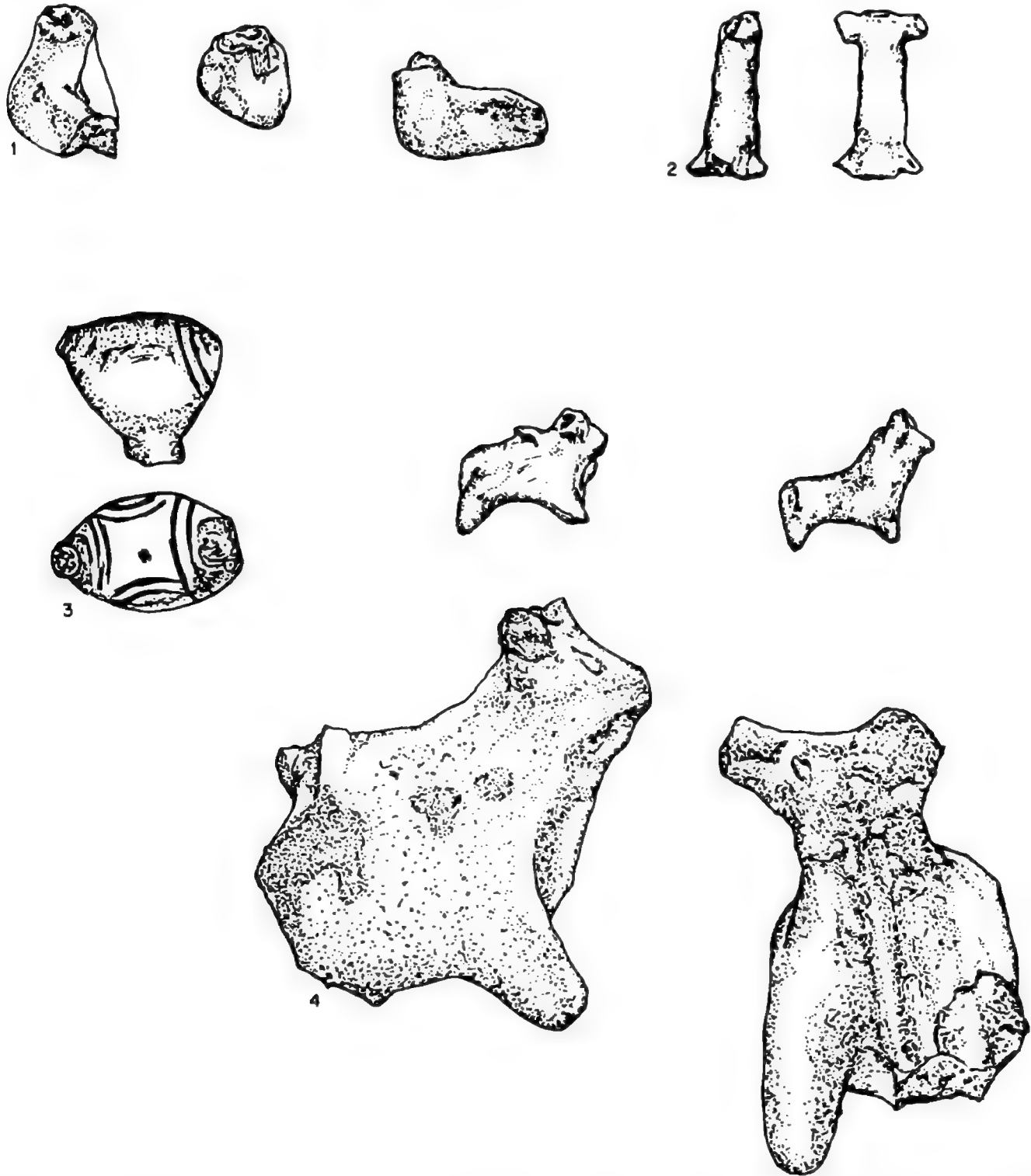


Fig. 3.49: Said Qala, terracotta figurines: (1) Female figurines; (2) Standing figurine; (3) Bird figurine; (4) Bovines.

lower torso stylized as a trapezoidal cone which also functioned as base. One example had an incised pubic area. More rarely found were examples of seated figurines with bent legs extended out to the front (Fig. 3.49, no. 1). A single example of a standing figurine with outstretched arms was also found (Fig. 3.49, no. 2). With the possible exception of the standing example all figurines represented females. These figurines are very similar to those found at Gumla II in northern Baluchistan and Namazga III in Soviet Central Asia.

### *Faunal and Floral Remains*

Samples of these remain unanalysed as yet but there is no reason to doubt that the occupants of Said Qala were exploiting domesticated sheep, goat and cattle as well as wheat and barley.

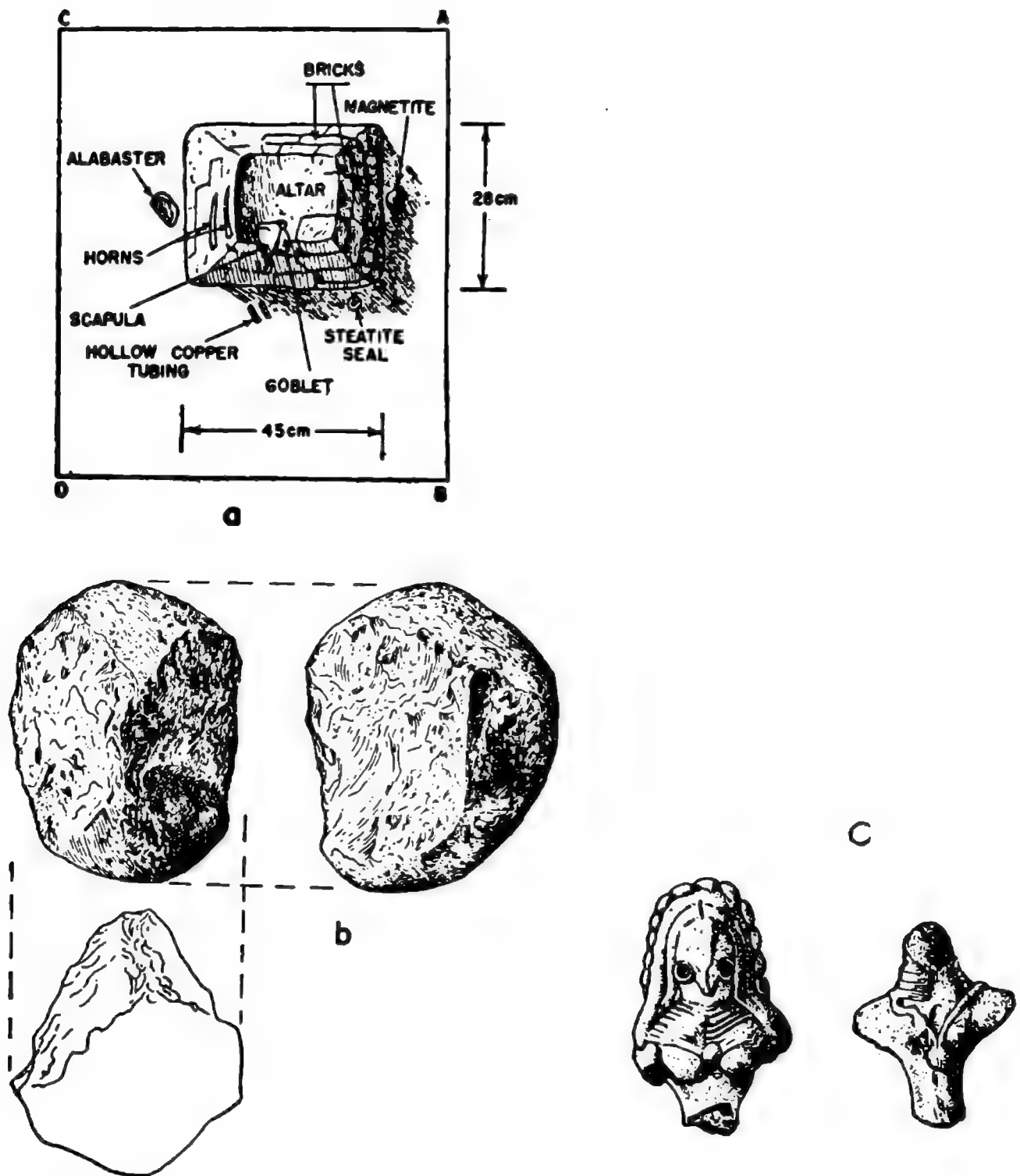
## Deh Morasi Ghundai

Deh Morasi (Dupree, 1963) is located only ten miles southwest of Said Qala. It is only about half the size of Said Qala, and the excavations were very limited. Besides a sondage (6 × 2 m) three other small test pits were opened but incompletely excavated. Dupree was able to define four major occupational periods of which Periods I–III are of major concern here. Like Said Qala it is felt here that all the prehistoric occupations are essentially of a single major period. However, Deh Morasi is later than Said Qala and represents a Mundigak IV<sub>1</sub> type occupation.

### *Stratigraphy and Architecture*

The limited nature of the excavations prevented the delineation of any structures, and most stratigraphic observations are based on artifact content and soil depositional levels. Period I is characterized by laminated silt-clay layers of soil which contained a few artifacts but otherwise devoid of features. The major occupation at Deh Morasi was Period II which is divided into three phases, IIa–c. Dupree (1963: 119) originally proposed a “gap” in the occupation of the site between Periods I and II on the basis of the associated ceramics. However, the Said Qala excavations have shown that such a gap is not warranted on the basis of the ceramics, and stratigraphically the two periods are superimposed atop one another. The only architectural feature of significance found in the excavations was recorded in Period IIa. This was a small (45 × 28 cm) mud brick structure (Fig. 3.50a) trapezoidal in shape with the following artifacts in direct association: ceramic female figurine, copper tube and seal, goat bone and horn, utilized magnetite nodule (Fig. 3.50b), and pottery. Dupree interprets this structure as a “household shrine” as well it might be. The entire feature was surrounded by a prepared clay floor. Morasi IIb was distinguished by a semicircular mud brick oven associated with a prepared floor and the only section of mud brick wall defined at the site. Period IIc was represented only by a series of successive living surfaces and cultural fill. Period III was





**Fig. 3.50:** Deh Morasi Ghundai: (a) Shrine complex, Period IIa; (b) used magnetite nodule, Period IIa; (c) female figurines, Period IIa.

described as a unit of unstratified mound fill the major features of which were three burials. However, all three burials seem to be intrusive and of a much later date. Indeed, these burials are all similar to those of the Kushano-Sasanian cemetery found at Said Qala which would also account for the presence of the red slipped pottery found in this period. The final Period was a series of highly disturbed deposits containing Early Islamic Glazed pottery and some prehistoric objects.

## *Chronology*

A single C-14 date of 3200 B.C. (corrected for MASCA factor, Dales, 1973: 159) is available for Period IIb. This single early date is difficult to evaluate without more corroborative data.

## *Ceramics*

Period I contained only the crude handmade chaff tempered pottery referred to as Said Qala Coarse. This pottery was also found at both Mundigak and Said Qala throughout most occupations. Dupree originally interpreted this pottery as representing a chronologically early phase of ceramic technology based on its lack of technological sophistication, but the stratigraphic associations of this type at the other sites indicates that this is no longer tenable. There is no reason to suppose that Period I is not essentially contemporary with the rest of the occupation periods at Deh Morasi.

The prehistoric pottery found in all subsequent occupations at the site is comparable to that identified in Mundigak IV<sub>1</sub>. With the exception of the Said Qala Coarse pottery it is all wheelmade and a buff-red paste with sand- or self-temper. Decorated motifs are almost entirely confined to geometrics which are very similar in their overall style to those of Mundigak III<sub>5-6</sub>-IV<sub>1</sub>. The motifs are black and executed either directly on the red surface or on a thin buff-white wash. However, a more definite association with Mundigak IV<sub>1</sub> is based upon the predominance of bowl and beaker vessel forms. Both bowl and beaker vessel forms were confined primarily to vessels with S-shaped walls, and some beakers had pedestal bases. These vessel forms had their highest relative frequency during Mundigak IV<sub>1</sub>. Equally convincing of a Mundigak IV<sub>1</sub> association is the low relative frequency of Quetta Ware which is confined to the "linear style" of decoration and a few examples of the curvilinear or floral (bucranium) style. Comparable Quetta Ware was not found earlier than Period IV<sub>1</sub> at Mundigak. In addition, a zoomorphic motif was found on Quetta Ware in Morasi IIb. Such motifs do not appear before Mundigak IV<sub>1</sub> and were completely absent at Said Qala. Unfortunately no special function or intrusive types of pottery were located at Deh Morasi.

## *Lithic Artifacts*

Lithic artifacts were few in number and found only in Periods I-II. Milling stones and pestles were found as were a few examples of stone hoes. Also recorded were examples of stone celts and retouched flakes. In addition there was the single utilized magnetite nodule found in the "shrine complex" which is comparable to the iron ore hammerstones located at Said Qala.

## *Bone Artifacts*

Only a very few bone artifacts were found in Periods IIb-c. These were the simple punches or awls encountered in the other sequences as well as a similar artifact Dupree refers to as a scraper.

## *Metal Artifacts*

All the metal artifacts were copper according to Dupree (1963: 98) and were confined to Periods IIa–c and IV. Associated with the “shrine complex” in IIa were two fragments of a hollow tube and a handle fragment. Several fragments of simple pins were located in IIb–c, and a single fragment of a compartmented seal was found in IV.

## *Small Miscellaneous Artifacts*

*Spindle Whorls.* Only disc shaped spindle whorls were found manufactured from ceramics and steatite.

*Stone Vessels.* Two fragments of simple angular-walled alabaster bowls were found in Period II.

*Beads-Pendants.* A elongated bone pendant and a disc bone bead were found in Period II.

*Seals.* Three fragments of compartmented seals with geometric motifs were found. Two were made from steatite, Period II, and one from copper, Period IV.

*Ceramic Figurines.* Zoomorphic figurines were confined to a leg fragment in Period IIb and a bird figurine in IIc. The female figurine found in association with the “shrine complex” of Period IIa was a classic example of the “Zhob” style figurine found in a Period IV context at Mundigak. Another possible “Zhob” figurine was found in Period IV and a fragment of a seated figurine was located in IIc.

## *Faunal and Floral Remains*

The faunal remains from Deh Morasi have never received adequate analysis, although Dupree reports sheep/goat and large bovid bones from Period IIa and there is no reason not to assume that they were not domesticated. More important are the plant remains which have been studied by Chowdhury (Dupree, 1963: 126–31). A brick from the “shrine complex” of Period IIa was found to contain seed remains of a fodder grass (*Aegilops tauschii* syn. *A. squarrosa*) related to wheat, and domesticated six-row barley (*Hordeum vulgare* var. *afghana*). It would seem that the occupants of Deh Morasi were exploiting both domesticated plants and animals from throughout the occupation.

## *The Helmand–Seistan Sites*

Unlike the Kandahar region the prehistoric remains identified in the Seistan Basin in southeastern Afghanistan are known primarily from surface collections. Due to the nature of the resultant information the discussion for this region must centre almost exclusively upon ceramic data. Therefore, the previous format for presenting the data will be dropped in favour of a more generalized discussion. Sir Aurel Stein (1928) was the first to locate prehistoric remains in this region, and his work has been followed more recently by Fairservis (1961), Hammond (1970) and Dales (1972).

Fairservis was able to identify several prehistoric sites located primarily in the “Southern

Delta'' associated with the Rud-i-Biyaban River. Most sites appear to represent small villages although some are of considerable size such as Shahr-i Sokhta (Tosi, 1969) in Iranian Seistan. On the basis of surface collections only, Fairservis (1961: 97) found a great homogeneity persisting between various sites. This homogeneity led Fairservis to speculate that the prehistoric occupation of the Seistan was rather short. Of the many ceramic types defined by Fairservis for this area two are of particular importance here. The first, and most characteristic pottery, is that of Gardan Reg Decorated (1961: 87-8, 104-12). Basically this a buff-red ware with black to reddish-brown motifs applied directly to the surface, or more rarely to a buff slip. In vessel form and motif style this ware is similar to that found at Mundigak III<sub>6</sub>-IV<sub>1</sub>, Said Qala II-IV, and Deh Morasi. The second type was that of ''Emir Gray'' (1961: 86-7, 111-4). This finely made grey ware with black geometric designs is not found at the sites to the east. The geometric motifs are not much different from that of Gardan Reg Decorated and would appear to be a local development of this more broadly distributed buff-red ware. Also identified on these sites were examples of Faiz Mohammad Painted Wares and Quetta Wet Wares similar to those from Mundigak and northern Baluchistan. North of Seistan near the city of Farah a single site was found with a similar black-on-buff type of pottery at Tepe Barangtud (De Cardi, 1950: 56; Fairservis, 1952: 31; 1961: 98). Besides the pottery large quantities of cuprous slag (1961: 74) was found on the surface of prehistoric sites which might indicate that copper was locally available and exploited. Fairservis also located a series of graves at the site of Gardan Reg which by their ceramics and associated metal artifacts suggest a prehistoric affiliation.

More recently Dales (1972) has attempted additional work in Seistan. Excavations at the site of Nadi-i Ali (Sorkh Dag) failed to produce any evidence of prehistoric occupation. This site, once thought to have prehistoric occupations, was apparently occupied initially during the Achaemenid Period (sixth to fourth centuries B.C.). The last two seasons of Dales' work in Seistan were spent surveying the southern areas of Afghan Seistan. From the southwestern corner of Afghanistan, on the Shela Rud, Dales identified some decorated wares and basket-impressed pottery which almost certainly indicates the presence of prehistoric remains in this remote region. The survey by Hammond (1970) in northeastern Seistan along the Helmand Rud located a single site with possible prehistoric occupation near Darweshan. Until further work is carried out, the prehistoric occupations in Afghan Seistan remain very much a problematical factor.

Although technically outside the modern boundary of Afghanistan no discussion of the Seistan Basin is complete without some mention of the extremely important prehistoric site of Shahr-i Sokhta (Tosi, 1969; Lamberg-Karlovsky and Tosi, 1973; Biscione, 1973; Piperno and Tosi, 1975; Biscione *et al.*, 1974). This huge urban site has produced a material culture (Periods II-III) which is so remarkably similar to that found at Mundigak III<sub>5</sub>-IV<sub>1</sub>, Said Qala I-IV, Deh Morasi I-IV, and in the Quetta Valley that it has been identified as representing a ''Helmand Civilization'' (Lamberg-Karlovsky and Tosi, 1973: 26). Ceramically, the vessel forms, motifs and style of execution are nearly identical among the above mentioned sites. The same similarity can be found in metal artifacts, lithic artifacts, ceramic figurines, compartmented seals and architectural features. The similarity is so pronounced as to indicate that extensive interaction and communication was maintained between these sites.

The most extensive remains have been found in Periods II-III. Besides the strikingly similar examples of Quetta Ware and the more common black-on-buff/red pottery, smaller quantities of a black-on-grey pottery similar to Emir Gray from Afghan Seistan were also located. During Period III the black-on-buff pottery motifs become so highly standardized as to be monotonous by their repetition. Also during Period III the black-on-grey pottery increases in quantity. Besides pottery, Shahr-i Sokhta II-III yielded many other non-perishable and perishable items such as: objects of wood; basketry; textiles; and large quantities of alabaster, carnelian, chalcedony, lapis lazuli and turquoise objects. Not only were finished artifacts of semi-precious stones found, e.g. beads, but also waste flakes and tools of manufacture, suggesting that the site was a manufacturing centre for such objects which were exported to markets elsewhere. Alabaster was available locally as were probably chalcedony and steatite; carnelian has a variety of sources which might have been local as could have been the jasper drillheads for working such material (Piperno, 1973). Turquoise is also known from several localities in Iran. The lapis lazuli came from Badakhshan Province in northeastern Afghanistan, the major, if not the only, source for this blue stone throughout the prehistoric Middle East (Herrmann, 1968; Sarianidi, 1971b) with significant quantities being imported into Mesopotamia during Jemdet Nasr times. The Jemdet Nasr context is especially interesting since clay cylinder sealings of this period were found in Period I at Shahr-i Sokhta. It has been suggested that Shahr-i Sokhta acted as a major centre of manufacture and distribution for lapis lazuli to the western markets (Tosi, 1969; Lamberg-Karlovsky, 1972a; Lamberg-Karlovsky and Tosi, 1973). Relevant to the possibility of such an extensive trade in lapis lazuli, is the recent discovery of the Fullol or Khosh Tepe Hoard (Fig. 3.51) from northern Afghanistan (Dupree *et al.*, 1971; Tosi and Wardak, 1972). Although the cultural context is at present unknown and the actual location is somewhat in doubt, except that it comes from the southwestern border area of Badakhshan, it is extremely important. The hoard consists of a series of gold and silver vessels, both plain and decorated, with motifs suggestive of extensive foreign contacts, including geometric motifs resembling those found on Quetta Ware, a bearded bull resembling Early Dynastic Mesopotamian motifs, and a serpent and vulture motif similar to those found at Sialk III (eastern Iran). Whatever the ultimate context may be for this hoard, it indicates the far-flung influence that the lapis lazuli trade might have brought to bear on Afghan prehistoric developments.

Examples of a more local product exchange system can also be defined at Shahr-i Sokhta II-III. Excavations at Rud-i-Biyaban 2—30 km south, revealed what appeared to be a potters' village with numerous Period II-III ceramics and 50 kilns. A similar specialized site explanation has been proposed (Lamberg-Karlovsky and Tosi, 1973: 27) for the concentrations of copper slag at sites in Afghan Seistan. Rud-i-Biyaban 2 had two corrected C-14 determinations between 3000 and 2400 B.C. (Meadow, 1973: 198). Similar dates come from Shahr-i Sokhta II-III. A series of seven C-14 dates have bracketed the time period for these assemblages as being between c. 2900 and 2200 B.C. (Meadow, 1973: 201; Piperno and Tosi, 1975: 187).

Shahr-i Sokhta IV, the final occupation, was dominated by the construction of a large building of over 650 sq. m. Well preserved, it appears to be a complex of three connected buildings around a central courtyard. On the west the construction is strengthened by a large

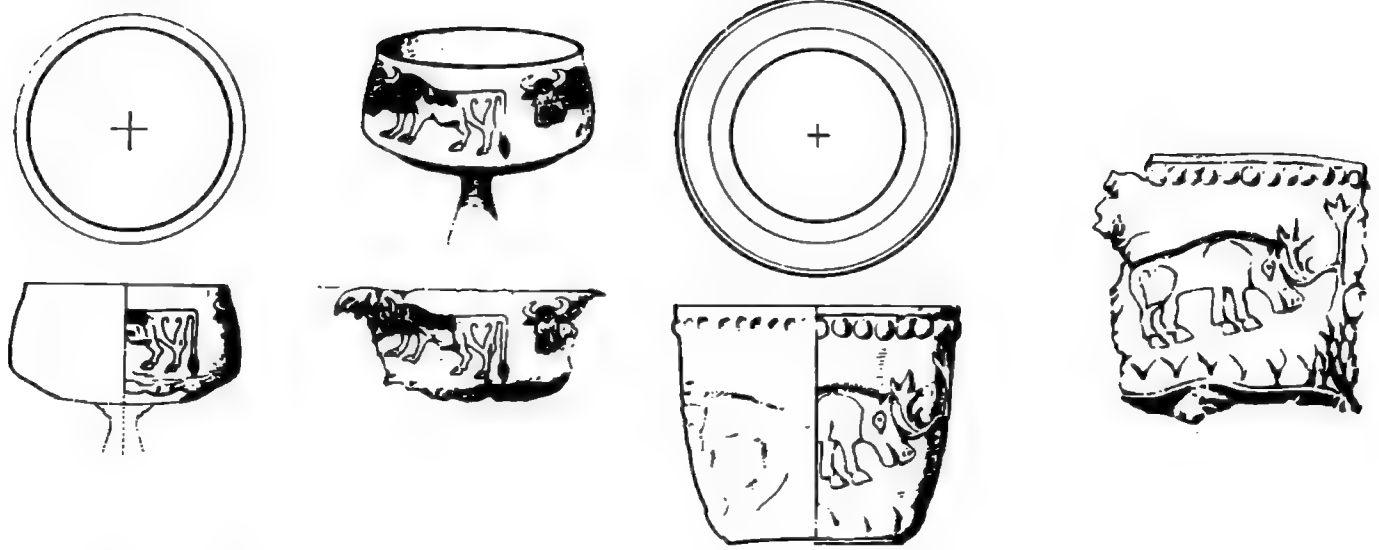


Fig. 3.51(a): Fullol hoard, gold vessels.

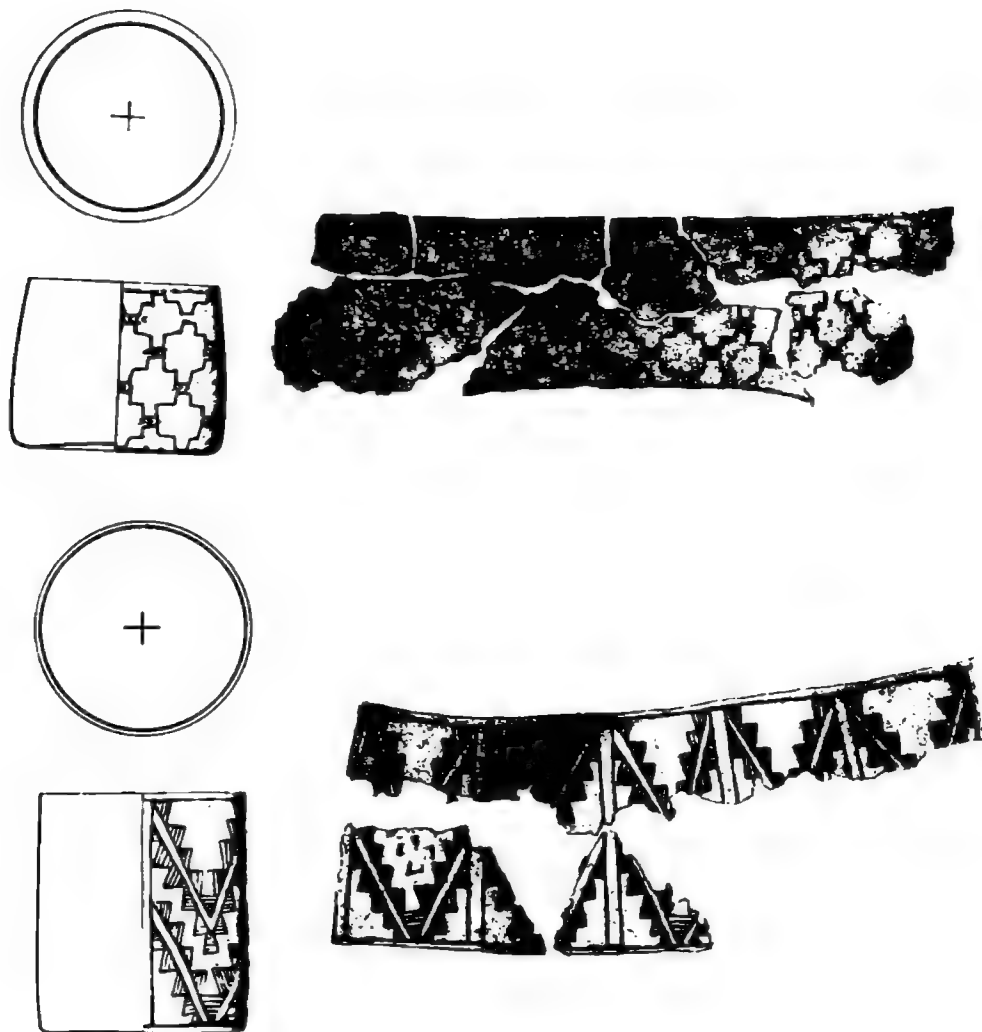


Fig. 3.51(b): Fullol hoard, small silver vessels.



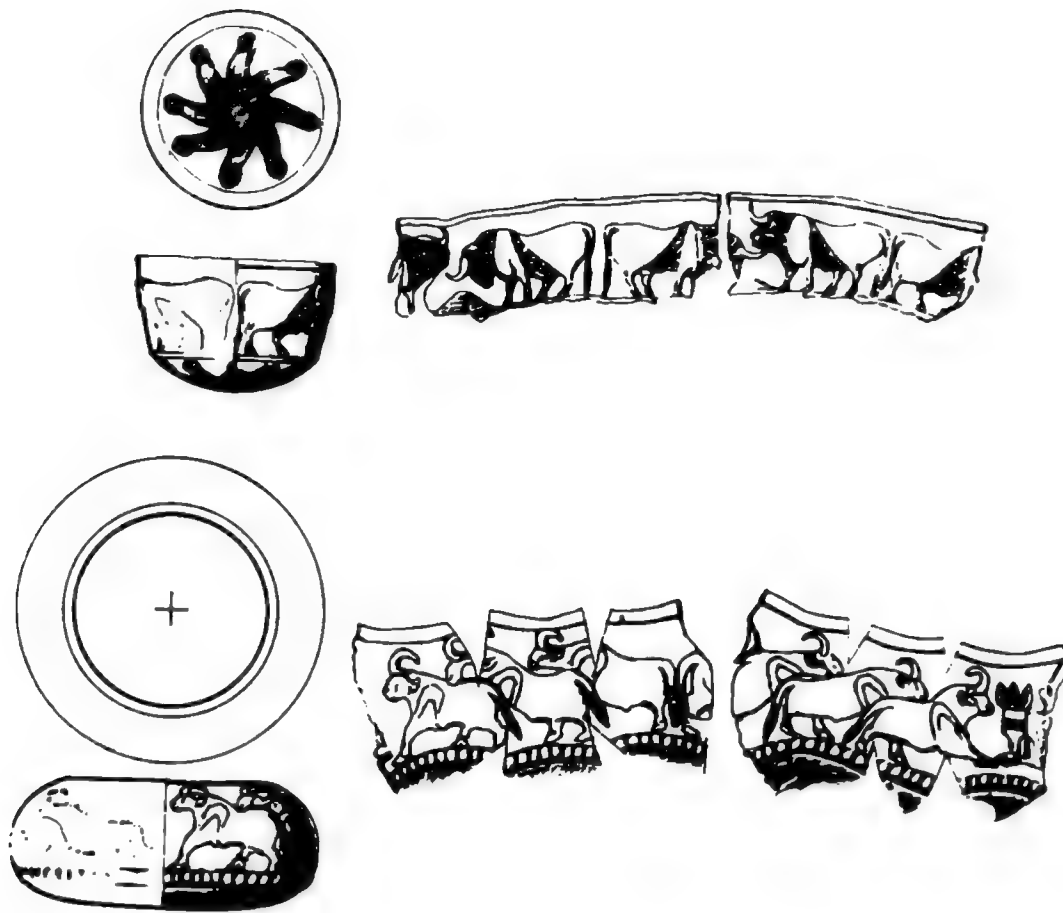


Fig. 3.51(c): Fullol hoard, silver bowls.

rampart. This large building appears to have been destroyed by fire and the burned skeleton of a young boy gripping a stone pestle was found in one room. During this period painted pottery almost completely disappears. Vessel shapes are distinguished by sharp carinations probably due to the use of a potter's wheel. The paste is a buff-red colour and surfaces are often slipped or burnished-techniques absent in previous periods. Among the limited examples of decorated pottery some parallels may be seen with the pottery of late Mundigak IV<sub>2-3</sub>.

## External Relationships

Having described the prehistoric developments in southern Afghanistan it is now necessary to delineate what other cultures, and areas, were exerting an influence on or were being influenced by these Afghan developments. Because of the nature of archaeological data such relationships are difficult to establish with any high degree of certainty. Generally such external relationships are determined by similarities in ceramic industries between geographically disparate sites, or the occasional intrusive sherd which indicates that some form of interaction was taking place. More rarely such relationships can be established by the identification of objects manufactured from a material which had a limited source of origin such as lapis lazuli or marine sea shells. Identification of such objects at sites geographically distant from the source areas clearly indicates that some form of direct or indirect interaction

between the two areas was taking place. Both types of relationships will be discussed here. The cultural and chronological boundaries for these external relationships will be based on the Mundigak sequence.

## Mundigak: Periods I–II

These two periods are combined because: (1) the limited and similar data concerning external relationships defined for both periods; (2) the chronological and cultural continuum represented by the two periods; (3) although the distinction between Periods I and II were useful in understanding the developmental sequence at Mundigak it is doubtful that a similar useful distinction can be defined for external relationships; and (4) the external relationships definable for Periods I–II provides a significant contrast for those definable in subsequent periods. However, even by combining the evidence from these two periods the only significant external relationships appear to be with the cultures of Northern Baluchistan in the Quetta valley.

Traditionally, comparative studies have correlated the KGM II–IV material (Fig. 3.52a) with that of Mundigak I–II (Casal, 1961; Dales, 1965; Mughal, 1970). Here, however, the correlation is made between Mundigak I–II and only KGM III–IV. The elimination of KGM II is based primarily upon the identification of a metal dagger blade in KGM III, but also on the occurrences of alabaster bowl fragments and ceramic characteristics. KGM III–IV is distinguished by a black-on-red slipped pottery with a preponderance of the same triangular motif recorded in Mundigak I<sub>3-5</sub>. This pottery made an initial appearance in KGM II, reached its maximum frequency in KGM III, and persisted into KGM IV. KGM III–IV are also characterized by an overwhelming number of handmade ceramics, a situation somewhat analogous to Mundigak I–II. However, this correlation is complicated by Fairservis' (1956) emphasis upon distinguishing aspects of the ceramics from KGM IV and their equation with the Damb Sadaat (hereafter DS) I material (Fig. 3.52a). Fairservis based his argument for the KGM IV—DS (Damb Sadaat) I correlation on the persistence of similar pottery types at both sites. Other authors (Mughal, 1970: 264–6) feel that the frequency of these types is so low in DS I to argue that the DS I assemblage represents a distinct and perhaps significantly later cultural development. Moreover, there are significant additions of various new types during DS I which also reinforce its distinctiveness from KGM IV. It would seem that on the basis of available evidence that DS I is distinct from KGM IV particularly in the present context. KGM IV is, on the other hand, distinguished by the presence of a polychrome, or bichrome, type of pottery. This fine wheelmade buff pottery with well executed geometric motifs in black and red, called Kechi Beg Polychrome (Fairservis, 1956: 259), is an extremely striking and important pottery type. Several of the Kechi Beg type motifs are similar to the ones identified on the bichrome sherds located in Mundigak I<sub>5</sub>. Likewise there is a basic similarity between this material and the bichrome pottery identified at Amri IA–C (Casal, 1964) in the lower Indus valley. The decorative style of Kechi Beg is similar to that of Amri, but is at the same time distinctive in its own right. The possibilities cannot be ruled out that the bichromes found in Mundigak I<sub>5</sub> might actually be Kechi Beg rather than Amri, or that Kechi Beg itself

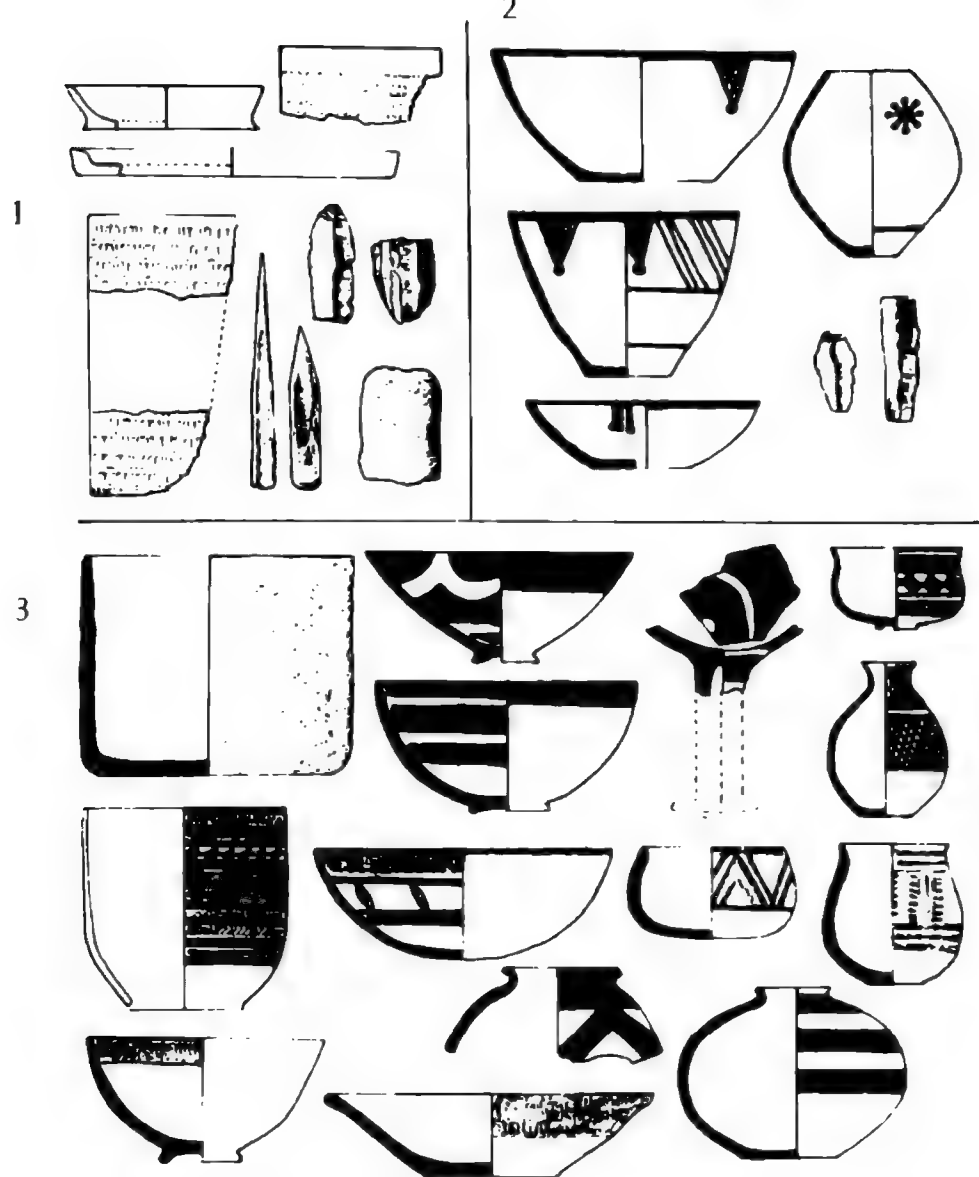


Fig. 3.52(a): Characteristic artifact styles of the Quetta valley: (1) Kile Gul Mohammad I and II; (2) Kile Gul Mohammad III; (3) Damb Sadatt I.

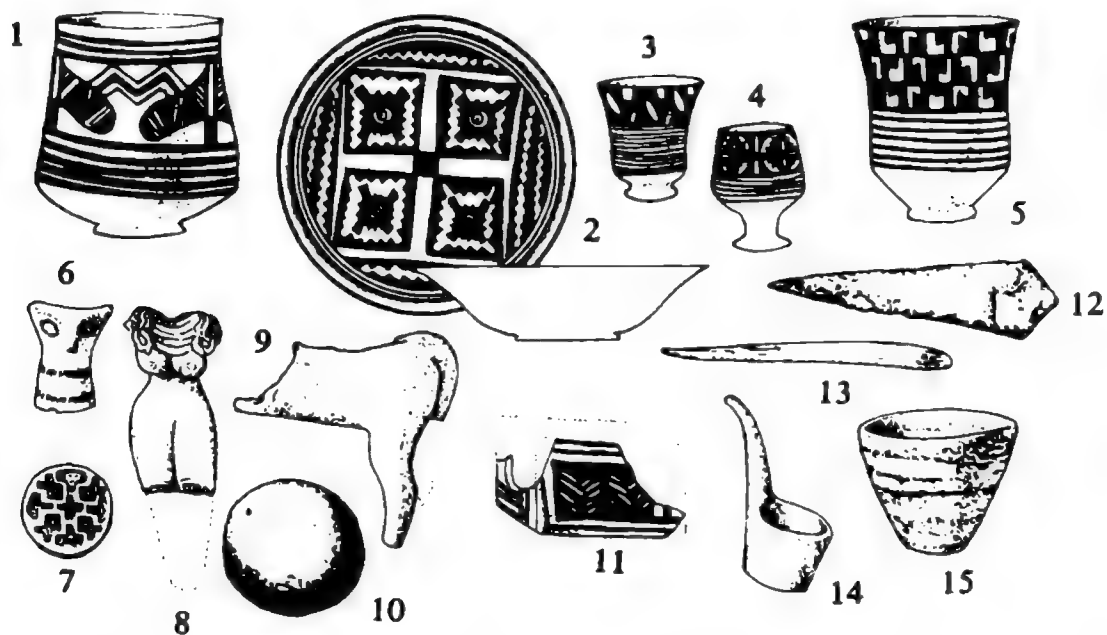


Fig. 3.52(b): Characteristic artifacts at Damb Sadaat II: (1- 5) pottery; (6, 8-9) figurines; (7) stamp seal; (10) clay rattle seal; (11) clay house; (12) bronze knife; (13) bone spatula; (14) clay ladle; (15) alabaster vessel.

reflects interaction and/or communication with the much more prevalent bichrome ceramic styles found in the Indus valley (Amri and Sothi). Another ceramic connection with the Indus valley, albeit tenuous, can be established by two sherds from Mundigak I<sub>4-5</sub>. Both sherds are from globular jars with simple horizontal bands painted in the rim area, and one band has festoons attached. Both of these sherds are somewhat similar to the Kot Dijian pottery (Khan, 1965; Mughal, 1970: 300) from the Indus valley. Besides these limited parallels there is an overall striking dissimilarity to be found among the majority of ceramics described for Mundigak I-II and KGM III-IV when contrasted with that recorded for these Indus valley sites. Although the exact significance of these parallels remain to be determined, they seem to indicate that some interaction was present between southern Afghanistan and the Indus valley during the mid-fourth millennium B.C. (see Dales, 1973: 159 for corrected dates of Kot Diji and Amri). Ceramic evidence, then, indicates that cultural interaction/communication was taking place over a distance of approximately 800 + km/550 miles, or approximately the same distance as is indicated by the presence of lapis lazuli found at Mundigak I which must have originated in northeastern Afghanistan (a single lapis lazuli bead is reported from Amri I). Existence of such interaction is further supported by additional ceramic parallels noted for other, less completely known, sites in Baluchistan (see Dales, 1965; Fairervis, 1971; and Mughal, 1970 for discussion).

West of Afghanistan, in eastern Iran, the nearest site which is chronologically comparable to Mundigak I-II is Tepe Yahya (Lamberg-Karlovsky, 1970). However, the fourth millennium B.C. occupations at this site (Periods VI and V) seem to have little in common with the Afghan material. True, a basic similarity may be distilled among the simple geometric motifs found on the pottery. But it would not be a convincing correlation, and is probably the result of the basic stylistic limitations imposed by a geometric repertoire (i.e. how many ways a triangle may be drawn). The only connection with Afghanistan is the presence of lapis lazuli (noted by Meadow, 1973: 194 but not by Lamberg-Karlovsky), and until more evidence is forthcoming statements of cultural interaction are premature.

A general trend has been to equate the Soviet Turkmenistan cultural complexes of Namazga II with Mundigak I-II (e.g. Mughal, 1970:358). However, the position here is that these fifth/early fourth millennium B.C. metal using cultures of Turkmenistan present more of a contrast than similarity with Mundigak. A basic similarity may be defined among several categories of artifacts (i.e. lithics, architecture, beads, etc.). Much of this similarity, however, might be attributed to analogous ecological-social-economic responses to the contingencies imposed upon a sedentary agricultural way of life under similar environmental circumstances. On the other hand, the respective ceramic stylistic traditions are, if taken in their entirety, significantly different. Certainly the ceramics do not reflect the same degree of similarity demonstrated by the more parallel styles found in Baluchistan. The importance of these differences cannot be appreciated without reference to the very pronounced ceramic similarities which will delineated for Mundigak III and Namazga III. However, the available evidence indicates that Namazga II type cultures had much more cultural interaction/communication with those in northeastern Iran (Hissar) than with any known Afghan manifestations, and therefore need not be discussed here (see Masson and Sarianidi, 1972 for a description of these important cultures).

## Mundigak: Period III

Mundigak III, and by analogy Said Qala I-IV, external relationships are characterized by an intensification of interaction/communication with Baluchistan and the Indus valley. Unlike the preceding periods external relationships can now be defined with some of the eastern Turkmenistan cultural developments. Most of these external relationships are again based upon ceramic correlations and in particular the identification of Baluchistan and Indus valley pottery types at Mundigak and Said Qala rather than *vice versa*. In contrast the relationship with Turkmenistan is based upon similarities in decorative style discernible on indigenously manufactured ceramics.

At Mundigak and/or Said Qala the following distinctive Baluchistan pottery types were identified: Kile Gul Mohammad black-on-red slipped; Faiz Mohammad Painted wares; Kechi Beg Polychrome or Bichromes; Quetta Wet wares; Nal black-on-buff and Polychromes. Except for the Nal types all these various types are also defined for the Quetta valley of northern Baluchistan. In addition there is a very pronounced similarity among all the vessel forms and decorative motifs found on Quetta valley pottery designated as DS I by Fairservis. As at Mundigak it is during DS I that Quetta Ware type pottery begins to appear in frequency. Indeed Mundigak III, Said Qala I-IV, and DS I are so similar that they could be considered a single cultural complex. Parallels and correlations can also be made for other areas of Baluchistan (see Mughal, 1970, 1975a; Fairservis, 1971) but none are as dramatically similar as the Quetta valley material given the available information. Two corrected C-14 dates of 3150 and 3100 B.C. are available for DS I (Fairservis, 1971: 395).

Artifacts indicating interaction with the Indus valley proper appear to be somewhat more infrequent than those for Baluchistan. Found at Mundigak and DS I (but not Said Qala) were examples of a globular jar with short neck and everted rim decorated with simple horizontal bands that are similar to Kot Dijian type pottery found in the early occupations at: Kot Diji (Khan, 1965); Harappa (Mughal, 1970); Amri (Mughal, 1970); Gumla II-III (Dani, 1970-71; Mughal, 1973, 1974a); Jalilpur II (Mughal, 1972b, 1974b); and Sarai Khola II (Mughal, 1972a). The distinctive Wet wares have also been found in the Indus valley in the early levels at Mohenjo-daro (Mughal, 1970), Gumla II (Dani, 1970-71), and Jalilpur II (Mughal, 1972b, 1974b). In addition several of the bi- or polychromes identified at Mundigak and Said Qala are very similar to those of Amri I. However, many of the black-and-red on white polychromes identified at Said Qala are more directly comparable to the potteries of Gumla II-III than Amri I. It is equally interesting to note that many of the brown-on-white motifs recorded on Gumla II pottery are similar to Quetta Ware. The female figurines identified at Said Qala are strikingly more similar to those found in Gumla II than those of Mundigak III. Similar figurines were found also at Jalilpur II. At Jalilpur several examples of lapis lazuli beads were found, and a single example was identified at Sarai Khola II (Halim, 1972). Although the evidence remains fragmentary it is reasonable to conclude that some degree of interaction/communication was maintained between southern Afghanistan and the Indus valley.

West of Afghanistan the only directly related material is to be found at Shahr-i Sokhta I (Tosi, 1969; Lamberg-Karlovsky and Tosi, 1973) in Iranian Seistan. Unfortunately this period

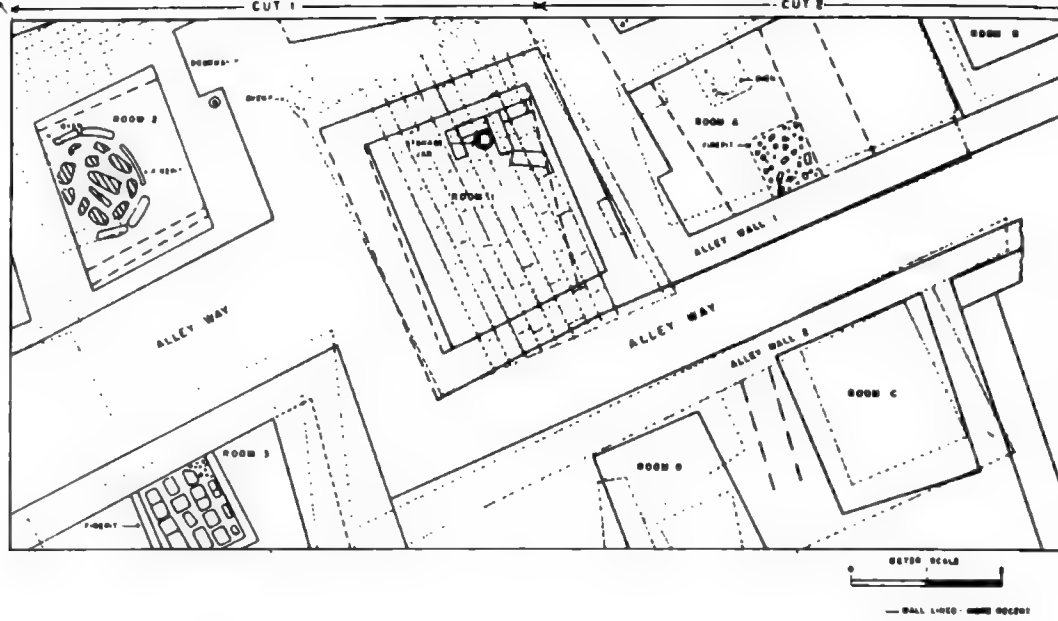


Fig. 3.53(a): Plan of settlement at Damb Sadaat II.



Fig. 3.53(b): Pottery of Damb Sadaat II.

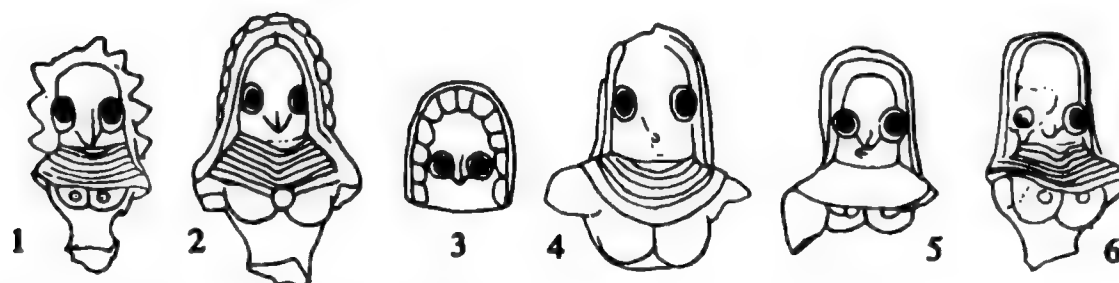


Fig. 3.53(c): "Zhub mother goddess" figurines: (1) Damb Sadaat III; (2) Deh Morasi Ghundai IIa; (3) Sur Jangal III (?); (4) Mundigak IV<sub>1</sub>, Periano Ghundai; (6) Dabar Kot.





Fig. 3.54: Namazga pottery from Geoksyur.

has had only limited testing. Even so the ceramics are similar to the Quetta Ware recorded at Mundigak III<sub>5-6</sub>, Said Qala I-IV, and DS I. Moreover, the pottery demonstrates the pronounced similarity with Namazga III material in Turkmenistan that is also noted for Mundigak (Figs 3.54, 3.55). Shahr-i Sokhta I has been dated to the end of the fourth millennium B.C. (Meadow, 1973: 197; Piperno and Tosi, 1975: 187) and therefore contemporary with DS I. Also found in Shahr-i-Sokhta I were limited amounts of a painted grey ware comparable to that of Faiz Mohammad Painted in the Quetta valley (Lamberg-Karlovsky and Tosi, 1973: 40). South of Shahr-i Sokhta, in Iranian Baluchistan, is the Bampur sequence (De Cardi, 1970). The small amount of material recovered from the earliest occupations (I-II) indicates some parallels with Mundigak III material. However, the sample is so small and the parallels so general as to make any correlation premature.

Further west at Tepe Yahya the ceramics continue to indicate a rather unrelated cultural

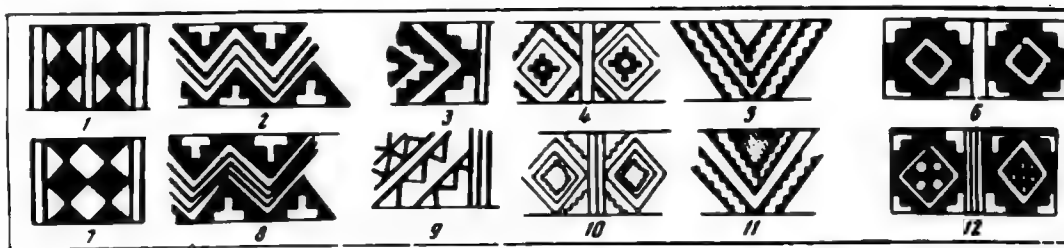


Fig. 3.55(a): Comparison of decorated pottery of Namazga III(1-6) and Mundigak III(7-12).

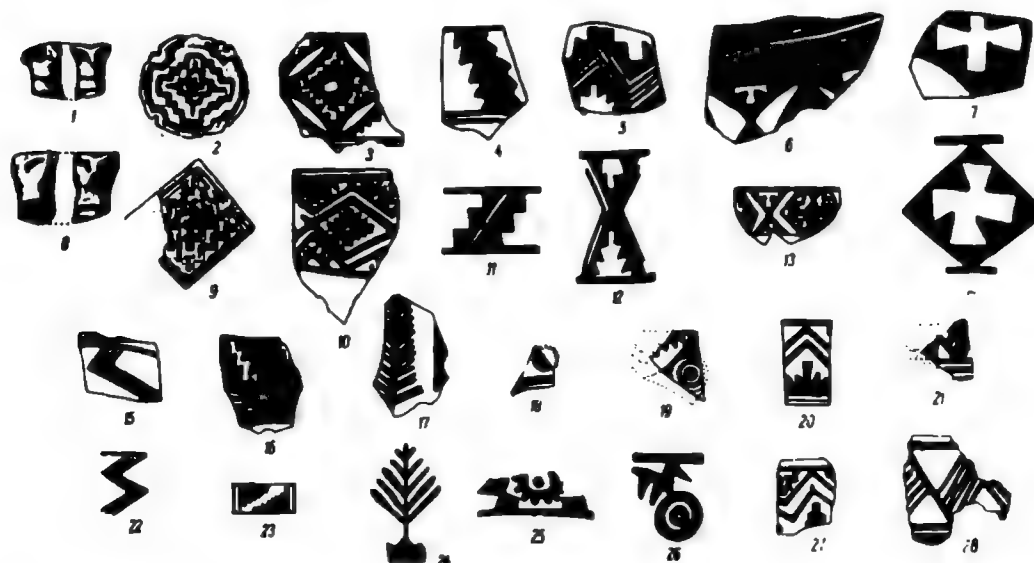


Fig. 3.55(b): Comparison of decorated pottery, seals and figurines of Damb Sadatt II (1-7, and 15- 21) and Namazga III (8-14 and 22-28).

tradition. The few limited parallels which are definable are in Periods VA and IVC. Period VA witnessed the development of new ceramic styles among which were a red/black-on-grey ware and a black-on-cream red slipped pottery somewhat similar to Bampur I-II (Meadow, 1973: 195) and by a very tenuous analogy to Mundigak III. Period IVC, while equally distinct, did have a few more convincing parallels. A small quantity of pottery from this period had geometric designs in black on a red, buff or grey surface similar to Bampur II- III. Some of the black-on-buff potteries were similar to those of Shahr-i Sokhta I and, therefore, also Mundigak III. Better parallels may be seen among a decorated greyware which is similar to that of Faiz Mohammad Painted pottery in Baluchistan. This greyware becomes increasingly more frequent in Period IVB. Another interesting item found in IVC was a straight-sided bichrome pot resembling those found at Sohr-Damb in central Baluchistan and belonging to the Nal stylistic tradition (De Cardi, 1965). It should also be mentioned that a sherd resembling Amri ID type of pottery was found on the *surface* of Tepe Yahya. Period IV at Yahya can be dated to the end of the fourth millennium B.C. on the basis of associated artifacts (Proto-Elamite tablets, cylinder seals, Jemdat Nasr polychrome, and bevelled rim bowls). Although there is some indication of limited interaction with the southern Afghanistan cultures it does not appear to have been extensive. Tepe Yahya, while important, seems to have been on the western fringe of Mundigak related cultures.

In contrast to the previous periods some very significant similar developments can be delineated between southern Turkmenistan cultures grouped under the heading of Namazga III and Mundigak III. Indeed, accounting for these similarities is becoming a focal point for explanatory models encompassing this vast area (e.g. Tosi, 1973; Lamberg-Karlovsky and Tosi, 1973). Previously it was thought that Namazga III represented a distinct break with the cultural traditions found in Namazga I-II. However, the most recent evidence indicates a continuity of development with these preceding periods (Masson and Sarianidi, (1972; 75-96). On the basis of ceramics a division is usually made into a western group, represented by the Kara-depe material, and an eastern group, the Geoksyurian sites.

The western Turkmenistan sites are characterized by a brown-on-buff or red pottery and more rarely a red slipped or polychrome decorated pottery. The major aspect of these ceramics was utilization of zoomorphic motifs which were absent among ceramics from the eastern sites. Zoomorphic motifs were, however, rare and could occur alone or in combination with geometric motifs. Actually the geometric style of decoration is not dissimilar to that of Quetta Ware but the presence of zoomorphic motifs has resulted in comparisons with the Hissar and Siyalk sequences of eastern and western Iran. The red slipped pottery and polychromes were limited to only geometric decorations. Geometric compartmented seals appear for the first time in the Turkmenistan sequence, and there is a significant increase in the use of alabaster for bowls, beads, figurines, and other artifacts. Female figurines were rare but provide an important comparison with the Afghan ones. They are seated with the head having "pinched" features including large eyes and noses. Some figurines were found without heads, arms or breasts: those with heads often had elaborate coiffures. Only rarely were male figurines found.

Eastern, or Geoksyur, sites are usually represented as distinct from western sites and more directly comparable to the material in Afghanistan. Its major characteristic is a buff pottery with buff-pinkish slip decorated with black and red polychrome geometric motifs (Figs 3.54, 3.55). Zoomorphic motifs are not unknown but are extremely rare and highly stylized. The most common motif was a bright red cross of several different styles surrounded by solid geometric elements of black. Motifs are large and usually incorporate most of the decorated surface. These motifs, although distinguished by their polychrome execution, are strikingly similar to those found on Quetta Ware. Undecorated red slipped buff pottery and a polished greyware are also found in small quantities. One such grey vessel was a stemmed cup similar to those found at Mundigak and Damb Sadaat.

In both eastern and western sites the most common form of decorated vessel was a simple hemispherical bowl, sometimes carinated. A few beakers were also found. In both areas a crude handmade utility ware persisted. An interesting contrast to Mundigak ceramics is that only during Namazga III are the first indications of wheelmade pottery identified, a marked contrast to the high frequency of wheelmade pottery in Afghanistan.

Among the eastern sites were located several examples of burials which were placed in circular tombs constructed of mud brick. Simple pit burials were also located inside the settlement area in contrast to the tombs which were located away from the main mound (Mundigak Mound C?). The tombs were semi-subterranean with vaulted rooms and multiple burials. These were successive burials the remains of previous interments being pushed to one

side. As the chambers became filled others were built superimposed on the earlier ones. Grave goods were present but not very elaborate, usually consisting of a few vessels and personal ornaments.

Female figurines are found in great frequency (300 at Geoksyur I) and are highly stylized (similar figurines occur in Namazga II). They are all seated with elongated heads, large noses and long necks. Short stubby arms are at the sides and the narrow waist merges into a broad hip area marked by steatopygia. Many have painted features and ornaments, and one even had a baby painted on her stomach with its hands clutching the breasts. Another group of large seated figurines with "bird-like" heads and long necks was manufactured from a finer clay. They have no arms or breasts, and their narrow waists and fat hips taper into long legs. Sometimes the head had an elaborate coiffure. Yet another figurine style had "... square shoulders decorated with applied strips of clay or little round protuberances. Their arms are either held at the side or are folded on the stomach. The torso of one such figurine is decorated with numerous little applied bosses while the breasts are in the shape of animal heads" (Masson and Sarianidi, 1972: 87). The figurines from both eastern and western sites are very similar to those found at Said Qala and Gumla II-III.

The Quetta style pottery, compartmented geometric seals, female figurines, burials and other artifacts certainly argue for some form of regular interaction/communication between Turkmenistan and southern Afghanistan. However, the three available C-14 dates, when corrected (see Dales, 1973: 159), date somewhat earlier than expected. These dates place Namazga III between 3500 and 3200 B.C. Unfortunately some have used this very fragmentary chronological information to postulate a priority, or origin, for Quetta Ware using cultures in the Namazga III material (e.g. Tosi, 1973; Biscione, 1973). However, until more C-14 dates are available, and until more information is known about northern Afghanistan such assumptions are premature.

## Mundigak: Period IV

The continuity and overlap defined between late Period III<sub>5-6</sub> and IV at the site of Mundigak and Said Qala make it equally difficult to determine two distinct and separate sets of external relationships for these two periods. Therefore, many of the observations regarding external relationships for Period III can also be applied to Period IV, and by analogy Deh Morasi I-IV. Here, as in previous periods, very parallel developments were taking place in the Quetta valley. Mundigak IV is best compared to DS II-III in the Quetta sequence (Figs 3.52b, 3.53) although DS I also has many characteristics of this period. Perhaps the most convincing correlation is provided by the introduction of zoomorphic motifs in DS II-III which are similar to those at Mundigak. As at Mundigak, DS III (Alcock in Fairervis, 1956) Quetta Ware demonstrated a marked decline in the solid geometric elements and an increased usage of simple horizontal lines and bucranium motifs. Overall the ceramics of DS II-III are very similar to those of Mundigak IV, and especially IV<sub>1</sub>, in vessel forms, styles of decoration, and variety of ceramics located. It should be noted that the zoomorphic motifs at both Mundigak and DS II-III are similar to the so-called "Kulli" pottery found in southern Baluchistan

particularly the site of Nindowari (Casal, 1966). Unfortunately, however, the cultural affiliations of this "Kulli" style pottery are very problematic at present.

Another important parallel with Mundigak IV<sub>1</sub> is the presence of "monumental" architecture. At DS, as at Mundigak, the previous areas of occupation were levelled for the construction of a large brick platform. Associated with the platform were rough limestone block stone drains and a bench against the southern wall. There is some evidence that spur walls (3 m thick) connected the platform with lower portions of the mound. The main wall of this platform was resting upon a small hollow constructed from stones and containing a human skull minus the lower jaw. In the immediate vicinity of this structure were located eight female figurines among which some were in the "Zhob" style. Found for the first time in DS III levels were cattle figurines, one of which had a "yoni" motif painted on its forehead. Other artifacts included: model houses (also found in Mundigak IV<sub>1</sub> and Said Qala III); clay rattles; small metal artifacts; alabaster bowls; compartmented seals; and, beads (lapis lazuli, carnelian and turquoise). DS III appears to be the last major period of prehistoric occupation in the Quetta valley. A single corrected C-14 date of 2652 B.C. is now available for DS III.

At Gumla many of the similarities noted between Gumla II and Mundigak III could apply equally to Mundigak IV<sub>1</sub>. Certainly some degree of interaction/communication was taking place between these two cultures. Although there is similarity in the female figurines found in later Gumla III the previous ceramic parallels cease. During Gumla III the similarity provided by Quetta Ware style motifs is absent. In its place is a predominance of black/brown and red-on-white motifs applied to a red slipped pottery. The most distinctive aspect of this decorated pottery is the use of intersecting circles and cross-hatching. Such motifs are extremely rare in southern Afghanistan, and, when identified, appear to be intrusive. Most bowl and jar vessel forms recorded at Gumla are likewise not found in Afghanistan and have much more in common with those identified in the Kot Dijian and Amrian potteries of the Indus valley. Of particular note in this respect is the presence of flanged rims (double rims) on many of the decorated jars at Gumla. This form is extremely rare in Afghanistan and would appear intrusive.

The existence of interaction/communication between southern Afghanistan and the Indus valley proper is very limited. Indeed, most of the evidence comes from Mundigak itself and the identification of infrequent examples of Kot Dijian and Amrian type potteries. At the Indus valley sites evidence of contact is limited to the rare identification of lapis lazuli. Artifacts at these sites are beginning to acquire the characteristics commonly associated with the cultural designation of "Harappan" (see Mughal, 1970, 1973). Indeed, the black-on-red slipped pottery found in Mundigak IV<sub>2-3</sub> is somewhat *reminiscent* of Harappan potteries in terms of vessel forms but not in its decorative style. In light of the poor chronological control for the Afghan sites it is impossible to dismiss or propose to what extent these two areas were interacting.

West of Mundigak the major site is Shahr-i Sokhta. Periods II–III at this site are almost identical in material culture to Mundigak IV. Certainly this site, discussed previously, represents a major urban centre for the Mundigak IV type culture. However, Period IV at Shahr-i Sokhta cannot be as convincingly correlated with developments at Mundigak although limited motif parallels can be found among later Mundigak IV<sub>2-3</sub> pottery. Likewise the



Bampur sequence of southeastern Iran has numerous parallels with Mundigak IV<sub>1-2</sub>, Shahr-i Sokhta II-III and its own periods of III-V<sub>1</sub>. These parallels have been summarized by De Cardi (1970: Table 5). Many of the ceramic characteristics of Shahr-i Sokhta IV can be also paralleled at Bampur V-VI. Of particular importance here is a black-on-grey canister jar found in Shahr-i Sokhta IV with horizontal friezes of stylized animals and geometric motifs which is strikingly similar to vessels found in Bampur VI and sites on the Oman Peninsula in the Persian Gulf.

Shahr-i Sokhta and Bampur also provide some parallels with late Period IVB at Tepe Yahya. Although many of the ceramics found at Yahya IVB and Shahr-i Sokhta are mutually exclusive an important link between the two sites is provided by the black-on-grey ware. These black-on-grey wares are not generally found west of Yahya but have, on the other hand, a very wide distribution to the east incorporating Baluchistan and south to the Persian Gulf. This pottery provides a basic, but tenuous, correlation between Yahya IVB, Shahr-i Sokhta III-IV, and the southern Afghanistan sites. Also found in Yahya IVB is a great proliferation of incised steatite vessels in various stages of manufacture. Similar steatite vessels have been found in Mesopotamia during Early Dynastic II-IIIa times. Lamberg-Karlovsky (1970, 1972a, b) has suggested that Tepe Yahya was a centre for the production of these steatite vessels which were seemingly directly traded with Mesopotamia. Yahya IVB then might have been a production centre for such steatite artifacts in the same manner as has been suggested for Shahr-i Sokhta and lapis lazuli. A similar argument has been proposed for the more western site of Tal-i-Iblis (Caldwell, 1967) with its large quantity of copper and apparent smelting furnaces.

In Turkmenistan there must have been considerable interaction/communication between the late Namazga III, Geoksyur Period, cultural developments and those represented by Mundigak IV. However, at the end of Namazga III, the sites of the Tedzen Delta in eastern Turkmenistan were abandoned and, with this, the close cultural similarity between these areas ceases. Somewhat comparable material can be identified in Namzga IV sites in central Turkmenistan (Masson and Sarianidi, 1972: 97-111). Both large and small sites have been found during this period several of which are resting directly on virgin soil, a factor which has caused speculation that they were settled by people from the Tedzen area. Ceramically this period is marked by a black-on-red slipped pottery decorated with geometric motifs. Motifs and some vessel forms are similar to those found at Mundigak IV<sub>2-3</sub>, but the degree of similarity is not nearly as pronounced as in Namazga III. A light coloured slip is also found at some sites suggesting a continuity with the previous ceramics. A partially burnished grey pottery with incised decorations and sharply carinated vessel forms also occurs in small quantities, particularly in the western sites. However, no painted grey wares have been found.

Large and small seated female figurines with incised and excised patterns were found in Namazga IV. Figurines with coiffures of plaits falling on the breasts and down the back become common. In the later phases of Namazga IV a flattened figurine style occurs which becomes increasingly important during Period V. Compartmented geometric seals made from stone and clay were also associated with Period IV. Finally, it is interesting to note that small traces of iron were found amid the copper slag at foundries associated with Period IV sites. This



early presence of iron is more interesting when the presence of iron parts of otherwise bronze artifacts is recalled from Mundigak IV.

Three corrected C-14 dates (Dales, 1973: 159) place Namazga IV between c. 2900–2600 B.C. Although the close similarity in material culture which had marked Namazga III and Mundigak III–IV<sub>1</sub> disappears in this period, there are indications that at least limited interactions were maintained. The black-on-red slipped pottery bears some resemblance to that of Mundigak IV<sub>2–3</sub>, as do the figurines and compartmented seals. However, it is difficult to evaluate this similarity given the chronological problems and lack of data from northern Afghanistan.

## Mundigak: Period V

There is nothing archaeologically comparable to Mundigak V anywhere in Afghanistan or the immediately surrounding areas. Besides Mundigak no other prehistoric site in southern Afghanistan which has been excavated appears to have been occupied after Period IV. Casal refers to some parallels with the Chust culture of the Fergana valley (Uzbekistan) in Soviet Central Asia dating from the first millennium B.C. (Masson and Sarianidi, 1972: 164–5). The pottery of this early Iron Age culture does have some parallels with that of Period V at Mundigak. There are also parallels with the Yaz I pottery of southeastern Turkmenistan (Masson and Sarianidi, 1972: 158–63). This Yaz I pottery, in turn, demonstrates similarities with the Late Bronze Age pottery of Namazga VI which included greywares. Indeed, explicit resemblances have been noted (Masson and Sarianidi, 1972: 161) between Yaz I and Mundigak VI pottery. This later correlation is very interesting since the pottery of Mundigak V appears to have more relationships with that of Mundigak VI, associated with an iron technology, than with Mundigak IV. Therefore, it is quite possible that Period V may be assigned to the Early Iron Age rather than Late Bronze Age. At present this is all quite problematical until further excavations are conducted at Mundigak or other sites in Afghanistan, particularly in the northern areas.

## Northern Afghanistan

### Akchanian Sites

A series of sites were located near Akcha City in northern Afghanistan by the Soviet Archaeological Mission to Afghanistan. Unfortunately, to date, only a preliminary report has been published on this material (Sarianidi, 1971a). The sites were designated by the name Dashli and assigned numbers (1–10). All the sites had extensive surface remains, but only two were excavated. The following is a brief summary of available data (Fig. 3.56).

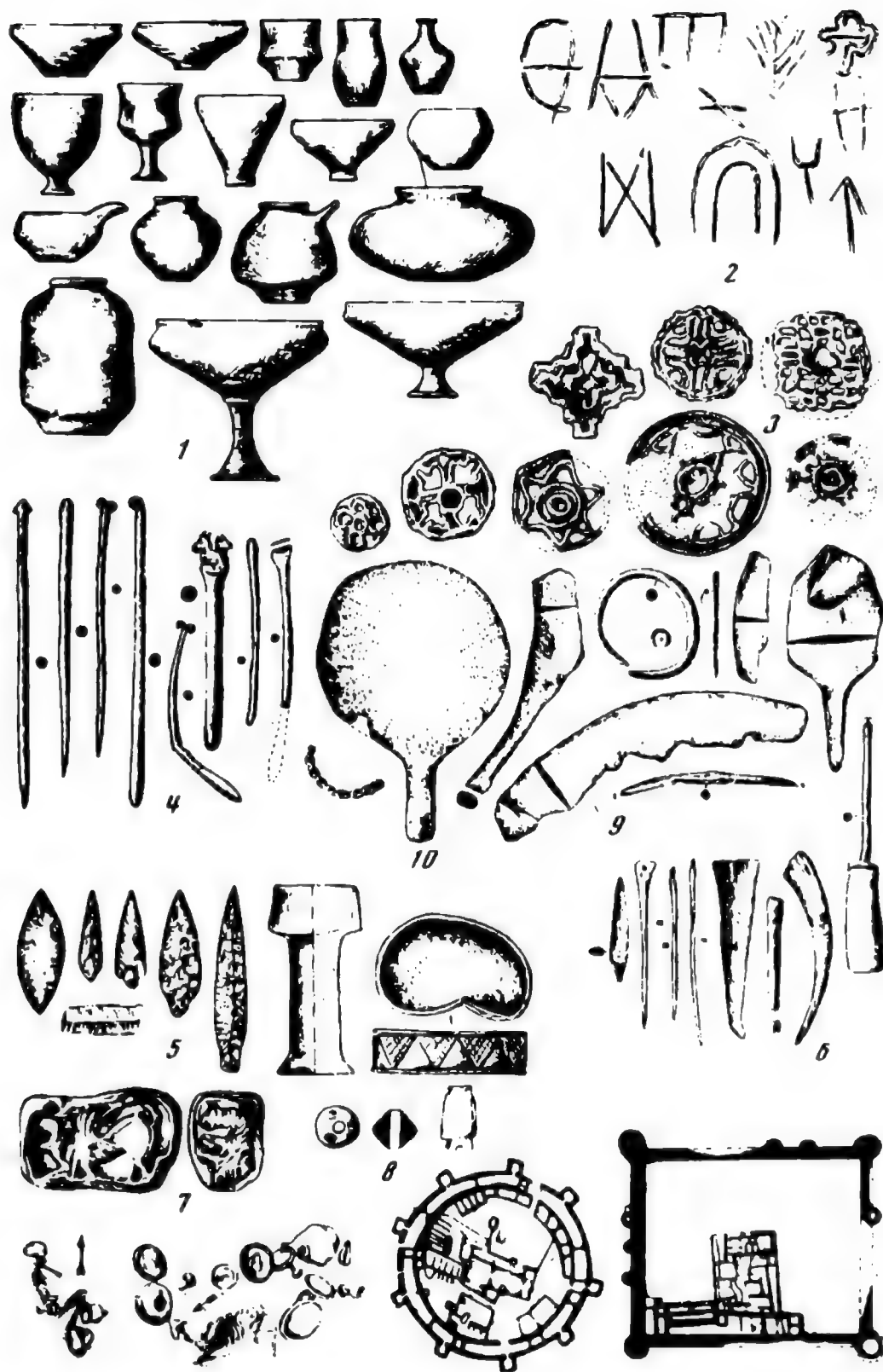


Fig. 3.56: Dashli site near Akcha City: summary of available data. (After Sarianidi, 1971a).

### Architecture

*Dashli 1.* The major feature at this site was a large mud brick rectangular fort (100 m on a side and walls 3–4 m thick) and associated settlement. At the corners and along the midwalls of the fort were located circular and semicircular towers. This is one of the earliest examples

of this particular type of fort architecture for this part of the world. The fort interior was filled with a maze of small rooms lacking any overall planning. A series of small rooms were located immediately against the fort walls which might have been defensive in function judging from the large quantity of sling balls found in them. Habitation structures were plastered with a yellow clay, and were characterized by wall niches and interior hearths. Only two major building levels were identified and both appeared to be basically contemporary. This association of a fort and settlement was repeated at several other Dashli sites.

At Dashli 1 were found two ritual burials of rams. These were complete articulated skeletons of adult rams placed in pits and accompanied by several ceramic vessels.

*Dashli 3.* Excavations at this site again revealed a basic site plan consisting of a fort and adjacent settlement area. However, in the centre of the settlement area was located a large circular (36 m in diameter) building. Connected to, but extending out from, the outer circumferential wall were nine rectangular towers. Two meters away from the outer circular wall an inner circular wall was constructed. The space between the two walls was divided into compartments some of which had access to the interior area and all had access to the towers. Only a single external entrance to the structure was definable.

Abutting against the interior wall were a series of small rectangular rooms. In the centre of the enclosure is a large rectangular building. This building was divided into rooms one of which had opposing decorative wall niches while the other walls had large niches with traces of burning. It would appear that this circular building had some sort of special function as yet unknown, but quite possibly religious in nature.

Cemeteries were found both at the edge of the site and within the structures themselves. Burials on the edge of the site were simple pits covered with bricks. The bodies were flexed and oriented to the north and accompanied only by ceramic vessels. Burials located within the circular building were significantly different. The method of burial was the same but these individuals were accompanied by not only ceramic vessels but also metal pins, mirrors, bracelets, rings and stone vessels. Also located inside the circular building were what are described as tombs which lacked bodies but had a high number of ceramic vessels.

### *Ceramics*

The excavators made three major divisions among the ceramics—wheelmade, handmade and greyware. Wheelmade pottery was a light coloured clay (buff?) and had vessel forms which included several sharply carinated pedestal forms. Handmade pottery seems to have consisted of the common types of general purpose utilitarian pottery encountered throughout the prehistoric period in Afghanistan. A small but important number of vessels were made from a grey paste, manufactured in the form of hemispherical cups and spouted bowls, and had incised decorations.

### *Other Artifacts*

Lithic artifacts included various sizes and projectile points and blades. A wide variety of metal artifacts were found including: razors, bracelets, mirrors, pins, knives, daggers, serrated

sickle blades, axes and a silver ring. Geometric compartmented seals were identified and made of stone, ceramic and metal materials. Two stone seals were found which depicted zoomorphic motifs (a scorpion and winged lion). Ceramic and stone spindles and bone punches were also found. Beads of semi-precious stones were found on the surface of Dashli 1 along with the only zoomorphic figurine fragment.

## External Relationships

From the limited amount of available data, it is difficult to make comparisons with other sites. Sarianidi (1971a: 34) thinks that the Akchanian sites are representative for most of northern Afghanistan. However, the sample size is so small that such conclusions are premature. The only comparable material from within Afghanistan comes from the limited remains of the "Goat Cult Neolithic" found at Dara-i-Kur (Dupree, 1972). Moreover, it is postulated here that the "Goat Cult Neolithic" is actually contemporary with the Dashli material. The primary point of comparison is the ceremonial burials of domesticated caprids at both sites. The paucity of remains at Dara-i-Kur prevents other analogies among the material cultural remains from being made at this time. Two corrected C-14 dates are available for the Dara-i-Kur material of 1880 and 2190 B.C. are available. Such dates place the Dara-i-Kur material well within the acceptable range for the Late Bronze Age. More importantly, if the Dara-i-Kur material were acceptable as contemporary with the Dashli sites, it might well represent a contemporary nomadic culture during this period. A slight comparative resemblance can be discerned between the Dashli material and the Bronze/Iron Age remains recorded from the vicinity of Tash Qurghan (Gouin 1972). However, until more is reported about the ceramic remains, it is impossible to make any meaningful correlations.

More meaningful ceramic similarities may be seen between Dashli and northeastern Iran (Sarianidi, 1971a: 34)--Shah Tepe II, Tureng Tepe III and Tepe Hissar III. According to Sarianidi (1971a: 35) even more generic relationships can be determined between Dashli and Namazga VI again on the bases of ceramics. These comparisons appear to be based upon similarity in vessel forms, particularly pedestal varieties, and the presence of greywares. That similar vessel forms exist can be readily seen (Masson and Sarianidi, 1972: 137-46; Hlopina, 1972) but noticeably absent in the Dashli sites is the red slipped and polished pottery found in Turkmenistan. Similarities can be defined among other categories of artifacts but given the overall brief and preliminary nature of the published material definite correlations are difficult. Likewise ceramic comparisons can be made with the Late Bronze Age culture of Timargarha I-II in the Swat valley of northern Pakistan (Dani, 1967, 1974; Stacul, 1969).

Although the late prehistoric remains from northern Afghanistan are difficult to evaluate and correlate a few important points may be distilled. (1) Correlations indicate that the Dashli material probably dates to the mid or last half of the second millennium B.C. (2) The existence of settled agricultural communities, special function centres (forts), and pastoral nomads may be defined for this period. (3) Cultural communication persisted between northeastern Iran, southern Turkmenistan, northern Pakistan and northern Afghanistan during this period and is reflected in the ceramics. (4) Despite similarities in ceramics and other artifacts the

previously pronounced similarities in female figurines disappears. Beyond these basic points it is difficult to assess the late prehistoric period in Afghanistan because of the tremendous areal and chronological gaps in basic data. Certainly full publication of the Dashli material will mark a beginning in the elimination of this gap but it will be only that — a beginning.

## Later Afghan Prehistory: A Reflection

When the Afghan material is contrasted with available information from other areas of the Old World, the very limited nature of the sample size becomes strikingly apparent. Besides the Mundigak excavations, our total knowledge about these later prehistoric periods comes from limited testings at about a half-dozen sites. Furthermore, most of these are located in southern Afghanistan. Even a casual review of the archaeological literature demonstrates that the area of Afghanistan is the least known region between India and the Mediterranean Sea.

Therefore, any conclusion or explanation of Afghan prehistory presents the archaeologists with a problem.

Two rather broad basic categories of problems emerges from the archaeology of Afghanistan. The first category is concerned with methodological and chronological considerations which affect all aspects of prehistoric investigations. The second category consists of those problems related to specific cultural processes. Since the first category is generic to the successful resolution of the second it will be discussed first.

A major interpretative problem of Afghan prehistory is the almost total lack of information (except for Dupree's work) about central and northern Afghanistan. Without such information it is impossible to place the data from southern Afghanistan in a proper cultural perspective. Moreover, even the data from southern Afghanistan is limited and fragmentary. Mundigak, with all its methodological limitations, remains the primary cultural sequence with Said Qala and Deh Morasi providing important additional sequential information. Therefore, a basic sequence is available but since excavations have addressed stratigraphic and pragmatic problems there is no complementary information concerning settlement patterns. There has been no attempt (except for the later historic periods in Seistan) to systematically survey and test sites to determine changes in settlement patterns or site densities. A related problem is a lack of information about subsistence patterns and how man adapted to the ecological contingencies of Afghanistan. There is, perhaps, no greater need in Afghanistan prehistory than that for some systematic areal information regardless of the specific region. If an adequate understanding of Afghan prehistory is to be forthcoming, then the previous archaeological attitude of "pick a site and dig" must be replaced by systematic areal investigations focused on intra- and inter-site settlement and subsistence patterns (or what has been referred to as "paleoeconomy"—Higgs and Jarman, 1975). Another very pressing problem is the need for many more C-14 dates from all periods. Without a more precise chronological framework it is extremely difficult to address the more specific problems of cultural processes.

Fundamental to addressing the more specific problems of cultural process is a scepticism as to the usefulness of "diffusion" as an explanatory concept (Shaffer, 1974b). To appreciate

and understand the cultural developments witnessed in Afghanistan then such developments must be viewed as possibly resulting from indigenous processes rather than axiomatically attributing them to outside influences (Mesopotamia, Turkmenistan or the Indus valley). A prime example of this is the domestication of plants and animals. Not only does it now seem possible to hypothesize that an indigenous process of domestication occurred in Afghanistan, but also that new theoretical insights into these processes are still distillable from the Afghan data. Traditionally the processes of domestication has been envisaged as witnessing a gradual transformation from hunting and gathering to mixed agriculture and finally to specialized agriculture with pastoral nomadism developing much later (e.g. Spooner, 1972; Smith and Young, 1972; Lees and Bates, 1974). In contrast the Afghan data indicates a strong probability that specialized agriculture and specialized pastoral nomadism developed as contemporary and reinforcing adaptations allowing maximum use of resources (see Shaffer n.d. for extensive discussion). The existence of such a bidimensional adaptation and the associated symbiotic relationships which resulted are vital in understanding the cultural similarities perceived through space and time and the distribution of items with limited sources of origin. It is quite possible that pastoral nomads were a source of cultural communication and interaction between widely disparate sedentary groups. Moreover, the early existence of such pastoral nomads might significantly alter current explanations concerning the cultural and ecological contingencies surrounding the development of stratified societies. More specifically the existence of pastoral nomads yields new insights into the understanding of the nature and extent of the interaction/communication which existed between cultural developments in Afghanistan and those in Baluchistan, the Indus valley and Turkmenistan throughout the prehistoric period.

Another important problem which has not received adequate attention is what happened to the prehistoric occupations following Mundigak IV? No satisfactory explanation has been proposed which accounts for the apparent abandonment of the sites between Shahr-i Sokhta and Deh Morasi. The entire area of southern Afghanistan seemingly was abandoned until the late Bronze Age or Early Iron Age. If abandoned where did these populations go and why? Considering that the so-called "Helmand Civilization" encompassed one of the largest areal distributions of any prehistoric culture, it is extremely difficult to envisage a set of circumstances which would result in its total disappearance.

These are a few of the major problems apparent in the Afghan prehistoric record. There are several more specific ones such as: What was the role and nature of the lapis lazuli trade? Why is there no evidence of contact with the Harappan culture despite the evidence of such contacts in Turkmenistan and eastern Iran? Did the Helmand Civilization incorporate areas of central and northern Afghanistan? What is the significance of the widely distributed female figurines? Future investigations into the later prehistoric periods of Afghanistan will provide not only an understanding of areal cultural developments but also provide the opportunity for the construction of new explanatory models concerning some of the major cultural developments in man's past.



# The Early Historic Period: Achaemenids and Greeks

*D. W. Mac Dowall and M. Taddei*

## Historical Background

### The Achaemenid Empire

Cyrus the Great (559–529 B.C.) the founder of the Achaemenid Persian empire, after defeating Croesus of Lydia and conquering Asia Minor, gained control of all the Afghan plateau in a series of campaigns to the north and east of Iran. We see the extent of the Achaemenid empire in the three lists of the satrapies of Darius I (521–486 B.C.) from the Behistun inscription c. 516 B.C., and later from Darius' palace at Persepolis and on his tomb nearby at Naqsh-e Rostam— all in modern Iran. The eastern territories of the Achaemenids included modern Afghanistan (Fig. 4.1) was organized into the satrapies of the following:

- (a) Aria, modern Herat which was the important centre of eastern Iran. It had probably been, as Frye suggests, the main separation point of the Aryans who migrated to India from those who moved to the west, and its name was subsequently applied to the southern group of eastern Iranian territories as far as the Indus;
- (b) Bactria, the fertile country of Afghan Turkestan south of the river Oxus with its capital at Bactra, commanding the routes from Merv and Herat in the west, to Sogdiana in the north, China in the east and across the passes of the Hindu Kush mountains to the Kabul valley and India in the south;
- (c) Drangiana, the steppe country of the lower Helmand river and Hamun lake— modern Seistan (i.e. Sakastene) which derives its name from the Saka tribes who were settled there after their invasion in the second century B.C.
- (d) Arachosia, the east of Drangiana— the valley of the upper Helmand, modern Farah and Kandahar and the centre of Achaemenid ruling over the tribes as far as the Indus in the east and the sea to the south;
- (e) Sattagydia, the mountainous area of central Afghanistan including the Kabul, Bamiyan and Panjshir valleys later known as Paropamisadae, the land 'above the eagle';
- (f) Gandhara, the area of modern Jalalabad, Peshawar and the north west frontier province.

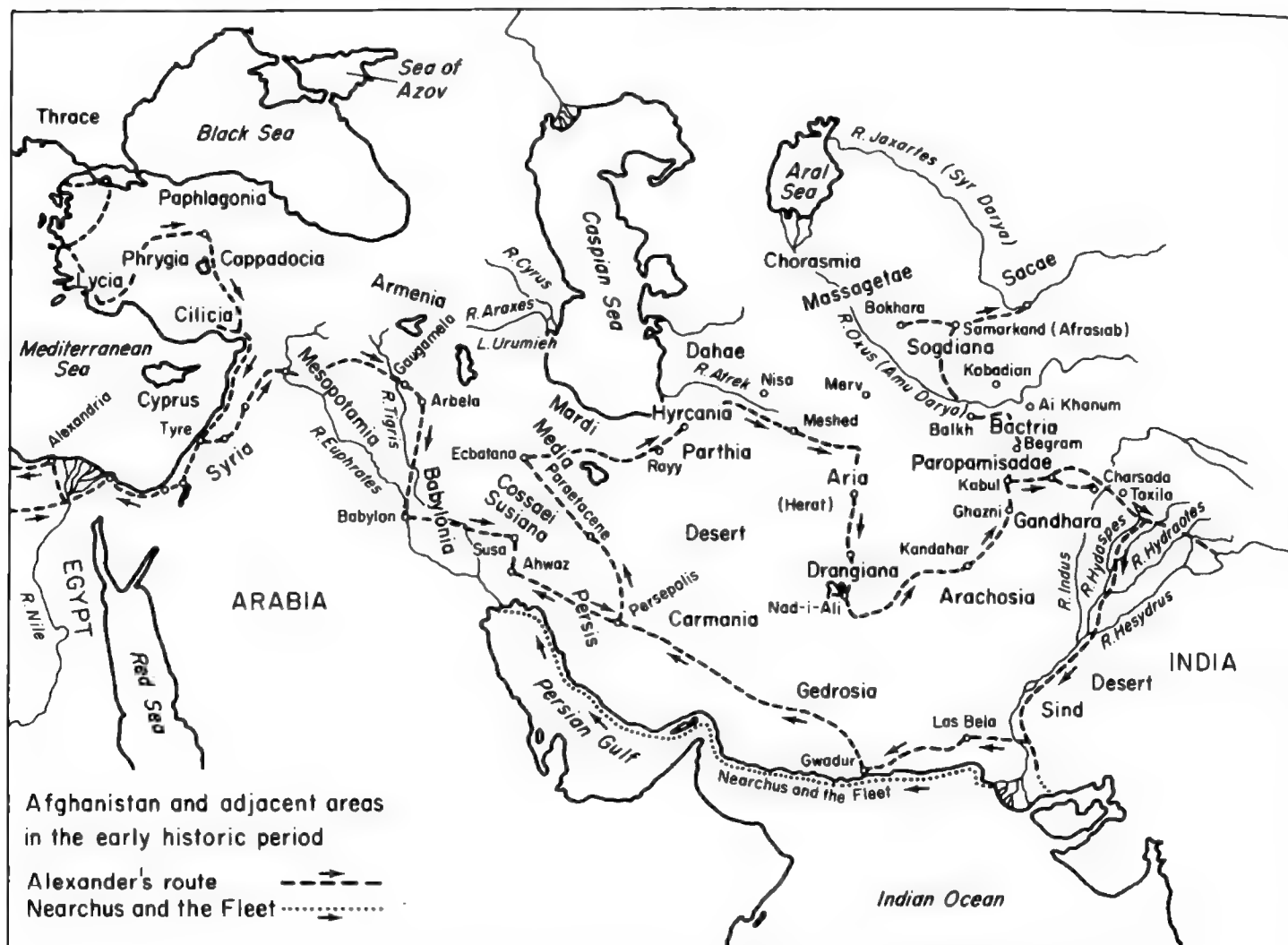


Fig. 4.1: Afghanistan and adjacent areas in the early historic period.

To the north of Afghanistan the Achaemenid empire included Choresmia (Khwarizm) and Sogdiana, and later in his reign Darius I added the Punjab and Sind to constitute the satrapy of the Indus. The whole of the empire was divided into provinces governed by satraps. Its economy was soundly based, trade was encouraged, and an effective road system was established. Aramaic was the language used for official business and it is from Aramaic script that the local Kharoshthi script was subsequently developed in Afghanistan and the Punjab.

## Alexander the Great and his Successors

It was the defeat of the last Achaemenid king, Darius III, at the battle of Gaugamela in the plains of Mesopotamia in 331 B.C. that made Alexander the Great the new ruler of the Achaemenid Empire, including its satrapies in Afghanistan. After capturing the Persian capitals in the west, seizing their treasures and symbolically burning Persepolis, Alexander marched into Afghanistan and crossed the Hindu Kush mountains to conquer the satrapies of Bactria and Sogdiana (330–327 B.C.). To secure his lines of communication he established permanent posts at Alexandria in Aria (Herat), Alexandria in Arachosia (Kandahar) and

Alexandria sub Caucasum (Begram or a site nearby in the north of the Kohistan of Kabul). Returning to Begram he marched east to conquer Swat and the Punjab (327–325 B.C.). On the banks of the Beas, his army refused to go further. Alexander built a fleet, sailed down the Indus to the sea and returned to Persia in 324 after a dangerous land march through Baluchistan. He left behind him satraps and governors, but his administration did not long outlast his early death in 323. Although his campaigns and short rule have left no direct traces in Afghanistan, his conquests had far reaching consequences and mark a watershed in the history of western Asia. In the north the old Achaemenid satrapies of Parthia and Bactria became provinces of the Hellenistic Seleucid kings; while the vacuum created by Alexander's withdrawal from the Punjab enabled Chandragupta, the new Mauryan King of Pataliputra (Patna), to extend his kingdom to northwest India and eastern Afghanistan.

After Alexander's death, Seleucus I Nicator emerged from the war of succession as King of Syria and most of western Asia; but when he tried to recover the territories of southeast Afghanistan and the Indus, he was forced to make peace, acknowledge the sovereignty of Chandragupta Maurya, and cede Gandhara, Arachosia and Paropamisadae in return for 500 elephants and a matrimonial alliance (c. 304 B.C.). These satrapies remained under Mauryan rule during the third century B.C. in the reigns of Bindusara (298–273) and Asoka (273–232), until the Mauryan empire began to break up with disputes over the royal succession and its great provinces established their independence.

## The Graeco-Bactrians

Bactria had been an important base for Alexander's campaign against Sogdiana; and presumably retained an important military role under the Seleucids with a strong Greek garrison. During the reign of Seleucus II, probably during the Third Syrian War (246–241) when Ptolemy III of Egypt invaded Syria, the two northwestern satrapies of the Seleucid empire, Parthia and Bactria, revolted and became independent kingdoms—Parthia under Arsaces and Bactria under Diodotus. Antiochus III, the Seleucid king tried to take punitive action against Bactria in 208 B.C. and besieged King Euthydemus in Bactria; but he was obliged to withdraw and formally recognized Bactrian independence. Before returning to the west, Antiochus crossed the Hindu Kush, and renewed his ancestral friendship with the ruling king, Subhagasena—a reference to the alliance that Seleucus Nicator had made a century previously with Chandragupta Maurya. But the visit was hardly friendly. Antiochus revictualled his army at Subhagasena's expense, robbed him of all his elephants and imposed an indemnity.

The consequences were far reaching. It was clear that a resolute invader would meet little opposition from the remnants of the Mauryan empire. Euthydemus annexed Seistan and Arachosia. His son Demetrius pushed his conquests further. There was subsequently a period of civil war. Eucratides took Bactria and other territories from the house of Demetrius (c. 170 B.C.) and afterwards we see two rival lines of princes. Under Apollodotus I and Menander the Graeco-Bactrians conquered a wide territory in eastern Afghanistan, the Punjab and Indus valley, governed by satraps and strategoi (c. 155 B.C.). Subsequently the Graeco-Bactrian kingdom becomes divided by civil war and lost most of its western territories to the

Parthians. We see several series of more local Greek rulers, until their kingdoms are progressively overthrown by the invasions of the Yueh-chi, and Sakas from the north and the Pahlavas from the west.

## Yueh-chi and Saka invaders

From Chinese sources we know that the Yueh-chi migrated westward into the Ili region c. 160 B.C. and displaced the Sakas, who migrated—some into the Pamirs, Kashgar, Khotan and some westward to the provinces of Herat and Seistan. The Yueh-chi themselves moved south across the Oxus c. 120–100 B.C., occupying the Graeco-Bactrian territory north of the Hindu Kush mountains. About 80 B.C. we find the first Saka king Maues ruling at Taxila and controlling the provinces of the Punjab. He is succeeded by other Sakas who are King of Kings—Azes I, Azilises and Azes II. The end of the Greek rule in the Paropamisadae is much less clear. The last known king was Hermaeus, but his coinage is extensively copied, and it is not clear who the issuers were. In Arachosia, after the rule of Azes I and Axilises, we find a line of Kings with Pahlava names, Spaliris, Spalagadama, Spalahores, the latter owing allegiance to Vonones as King of Kings who is sometimes identified with Vonones I of Parthia (A.D. 10–12).

Meanwhile the Parthian dynasty of Arsaces had maintained its independence from the Seleucids, and under Mithradates I had become a major power. After the conquest of Media c. 155 B.C. Mithradates I campaigned in Arachosia and took some border provinces from Eucratides. At this time the Parthians probably ruled Herat and Seistan. The Parthians had serious problems with the Saka migrations but Mithradates II (123–88 B.C.) was successful in settling them, receiving allegiance from them and establishing Parthian rule generally in the east. Isidore of Charax, who died c. A.D. 25 describes Arachosia and Kandahar as the easternmost part of the Parthian empire.

## The Indo-Parthians

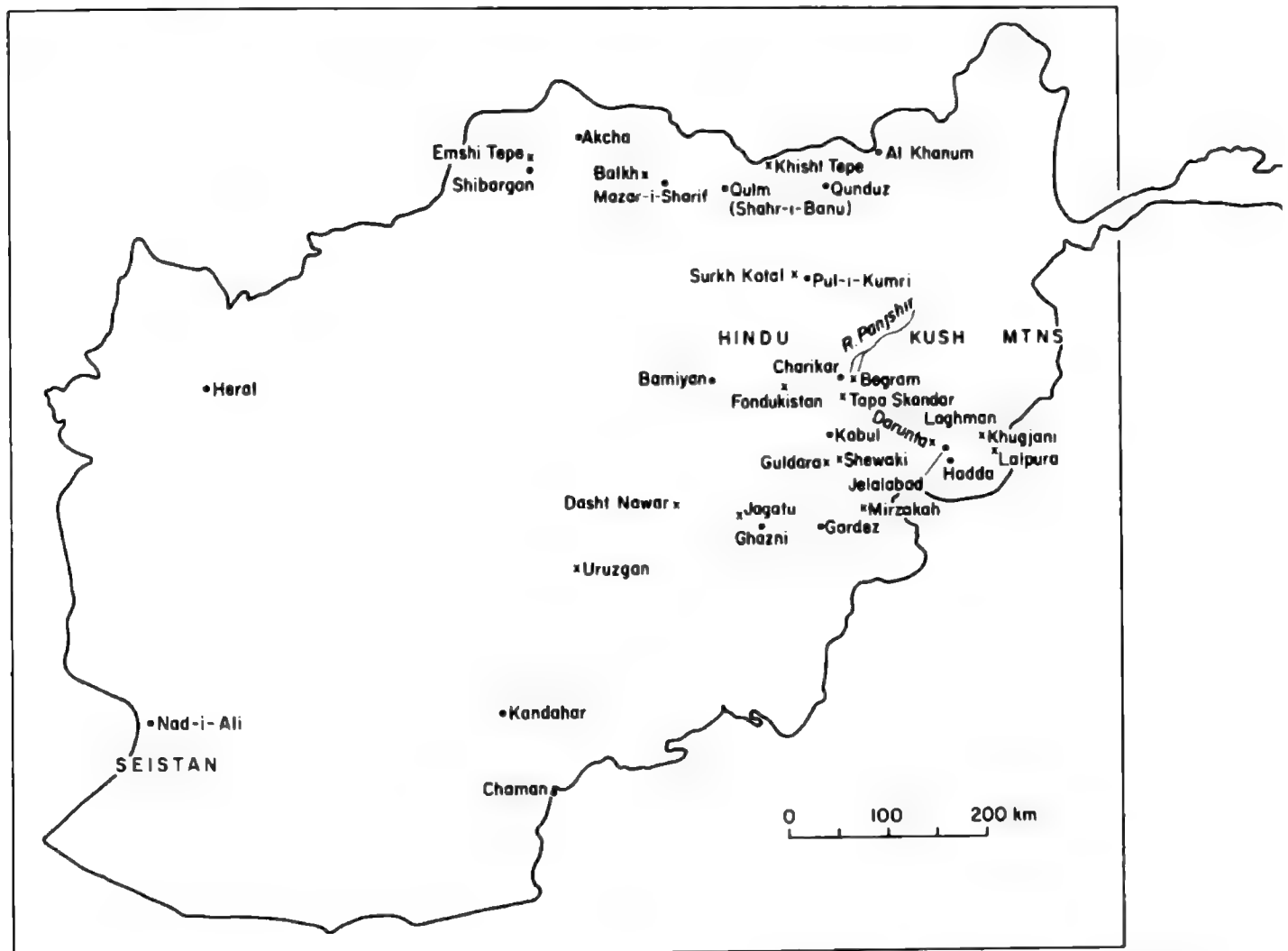
About A.D. 25 we see the emergence of a major new power in southern Afghanistan, the Indus valley and the Panjab—established by the Indo-Parthian King Gondophares. This dynasty is quite distinct from the Parthian kingdom and there is much to commend Herzfeld's hypothesis that the Parthian Suren in Seistan broke away to establish an independent empire. Gondophares controlled Seistan, Arachosia, and the Paropamisadae in Afghanistan, as well as extensive territories in the Indus valley that he captured from the Sakas and the East Greek kingdom that he conquered from the successors of Strato II. His nephew Abdagases continued to rule most of this extensive empire, but their successors lost the Paropamisadae, Arachosia, Gandhara and the Indus territories to the Kushans about A.D. 78. A much attenuated Indo-Parthian Kingdom, represented by Orthagnes, Pacores, Gondophares II, Sanabares I and II, continued to rule in Seistan throughout the second century A.D. and seems to have controlled at times both Herat and Merv.

# Epigraphy

## The Achaemenids

### *The Behistun Inscription*

Epigraphic material for the history of the Achaemenid period comes not from Afghanistan but from Behistun, Persepolis and Naqsh-e Rostam. The Behistun inscription (Kent, 1950) and the relief of Darius I that accompanies it, are cut on a cliff rising high above the main road from Mesopotamia to Media. Darius had the steps up to the relief smoothed away so that no one could approach it. The relief shows Darius seated with the rebels he had put down bound in front of him. The inscription is in three languages, Old Persian, Akkadian (the language of Babylon) and Neo-Elamite. It sets out the deeds of Darius after he became king and the battles he fought to subdue his enemies, listing the 23 countries of his empire. These include Aria, Bactria, Drangiana, Arachosia, Sattagydia and Gandhara—satrapies that are now part of



**Fig. 4.2:** Epigraphic and numismatic find sites of the Achaemenid, Hellenistic and Indo-Greek periods.

Afghanistan. A fragment of this text in Aramaic has been discovered in Egypt (Cowley, 1923: 248–271) giving credence to Darius' claim that he made many copies and sent them everywhere among the provinces.

### *The Role of Aramaic*

Aramaic had become the common language of the Near East under the Assyrians. The Achaemenids used it as the official language of their administration, and presumably introduced it to their satrapies in Afghanistan and the Indus valley. The Aramaic inscription discovered on an octagonal pillar during excavations at Taxila in Pakistan in 1915 (Marshall, 1951: 164–166) refers to an official, when Asoka was governor of Taxila under his father. The five Aramaic inscriptions known so far from Afghanistan, three from Laghman and two from Kandahar, also belong to the Mauryan empire that came to control the former Achaemenid satrapies in eastern Afghanistan in the third century B.C.

## Inscriptions of Mauryan Date

### *The Inscriptions from Laghman*

The first Aramaic inscription to be discovered in Afghanistan was the fragmentary stone tablet found in the neighbourhood of Pul-i-Darunta in 1932 (Fig. 4.3). It was puzzling because it contained a number of unknown words, with SHYTY repeated several times. Henning (1949: 80–88) showed that it contained not only Aramaic but Middle Indian Prakrit words and that SHYTY accompanied these. It seems to be an abstract from the 5th or 7th Pillar Edict of Asoka. Such abstracts were expressly authorised by Asoka in his Rock Edict XIV. We see that it is a bilingual Indo-Aramaic inscription similar in form to the one discovered at Kandahar in 1963.

A second Aramaic inscription was discovered in the Laghman valley in 1969, 30 km from Pul-i-Darunta. It is cut on the vertical face of a rocky ridge above the river in a position that would have dominated the old road (Dupont-Sommer, 1970: 158–173). Dated in year 10 of Asoka, the year of his conversion to Buddhism, it speaks of the expulsion of vanity and the king's prohibition against fishing. Dupont-Sommer's claim that it refers to the distance to Palmyra—"200 arcs to Tadmor", cannot however be substantiated (Humbach, 1973: 161–169).

A third Aramaic inscription of Asoka, dated in his 16th year, was discovered in 1973 in the Laghman valley some 12 km from its confluence with the Kabul river (Davary and Humbach, 1974: 1–16). It refers to the King's religious views and seems to give an indication of the distance to the next locality.

### *The Bilingual Rock Inscription at Kandahar*

In 1958 a fine rock inscription was discovered in Old Kandahar (Schlumberger *et al.*, 1958). It was in excellent condition with a text in Greek on the upper part of the rock and one in



Aramaic beneath it (Fig. 4.4). The Greek version, beginning with Asoka's name, gives the text of one of the pious proclamations of the king. It is complete in itself and followed by an Aramaic version of the same proclamation. Asoka, the greatest king of the Mauryan dynasty and the first ruler to unify India, had been a hazy figure in Indian texts and Buddhist tradition until the discovery of his inscriptions—proclamations in the form of rock edicts inscribed on rock surfaces or in pillar edicts inscribed on columns. These were intended to explain the king's concept of Dharma—not formal religious belief so much as attitude of social responsibility.

Asoka used the language and script of the localities in which he set up his inscriptions: middle Indian with Brahmi or Kharoshthi script in India, Aramaic in Taxila and Laghman and Greek and Aramaic here at Kandahar. Although the Indian texts are clear enough in outline, there have been difficult problems of interpretation, which the versions in non-Indian language have helped to solve. For example *dharma* was long translated as "law"; but the bilingual Kandahar inscription uses an Aramaic word that Dupont-Sommer translates as "truth" and a Greek word that must be "piety".

### *The Greek Building Inscription from Kandahar*

The second Greek inscription from the ruins of old Kandahar (Fig. 4.5) was discovered in 1963 by a German physician, Dr Seyring, who presented it to the Kabul Museum. (Schlumberger, 1964a: 126–140; Benveniste, 1964: 137–157). It is cut on a block of porous limestone some 45 × 70 cm. Its text gives the end of edict XII and the beginning of edict XIII of King Asoka. The stone is a rectangular block 12 cm thick which must have been part of a much larger monument—a building of stone on which the fourteen major rock edicts of Asoka were inscribed; and this suggests that we should in due course find more inscriptions from this building in old Kandahar.

Edict XIII is about "the sects". Asoka insists they must respect each other and accept the lessons of others. It is interesting to see how "the sects" are translated by "schools of thought" in Greek. Edict XIV, as in other versions, describes his conquest of Kalinga when 100,000 of its inhabitants were killed and 150,000 deported, the king's remorse for this, his order to abstain from eating the flesh of any living creatures and his zeal for piety.

### *The Indo-Aramaic Inscription from Kandahar*

About the same time, in the latter part of 1963, a fragmentary Aramaic inscription, now in an Italian collection, was bought in the bazaar at Kandahar. (Benveniste and Dupont-Sommer, 1966: 437–465). The stone is some 24 × 18 cm and contains a text of seven lines in Aramaic letters. The fragment has no name but is clearly Asokan because of its contents. It contains the strange word SHYTY which is used several times as in the Aramaic inscription from Pul-i-Darunta. Each time it occurs, it comes immediately before an Indian and after an Aramaic word. Although the script is Aramaic throughout, it is in fact a bilingual inscription involving two languages—Aramaic and Prakrit. The two are mixed—each group of words in one language is followed by a paraphrase or translation in Aramaic of the Indian text and the



Fig. 4.3: The Aramaic inscription from Pul-i-Darunta in Laghman province.





Fig. 4.4: The Graeco-Aramaic bilingual of Asoka from Kandahar.



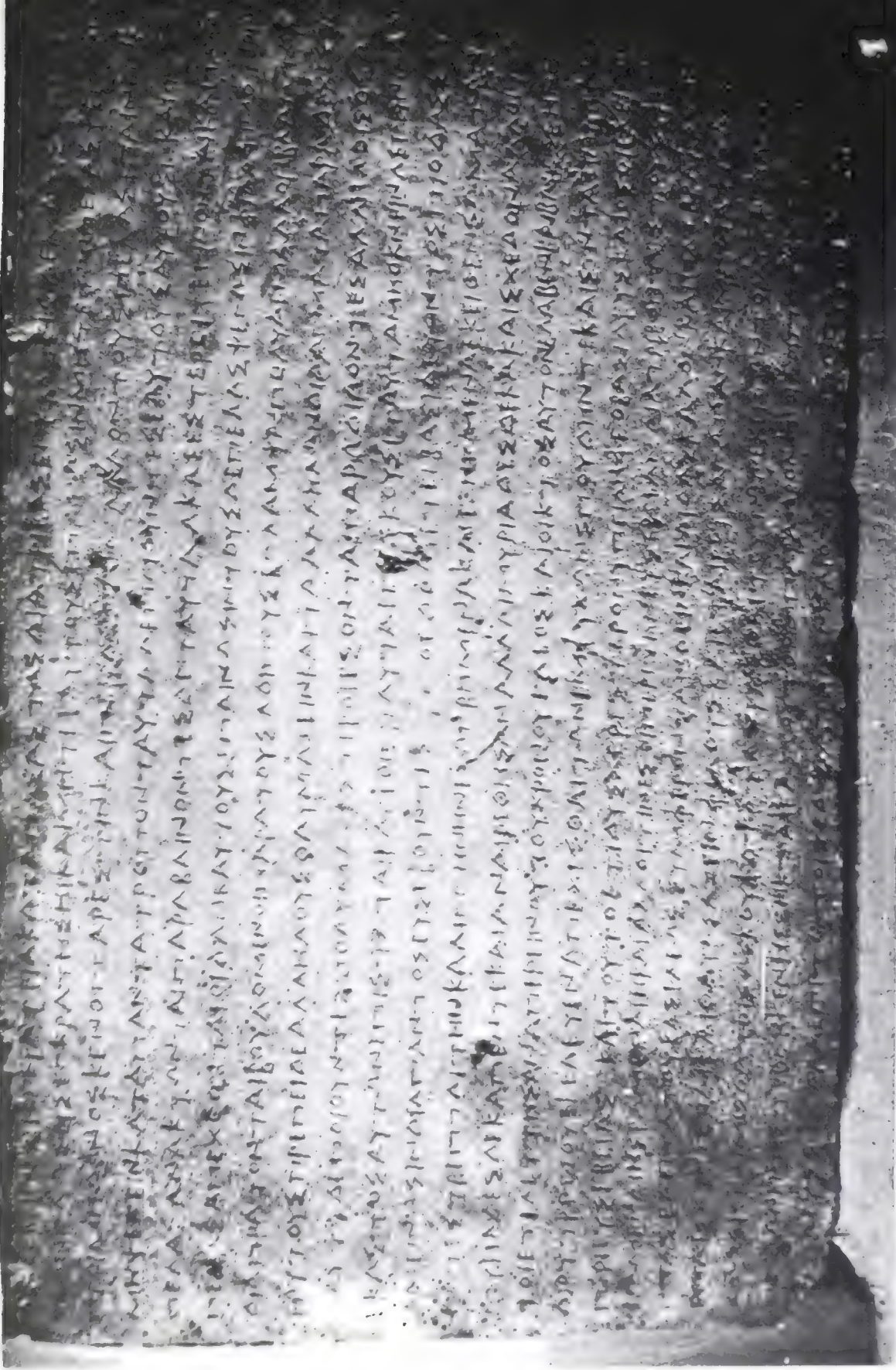


Fig. 4.5: The Greek inscription of Asoka from Kandahar.





Fig. 4.6: The Greek inscription from Ai Khanum

change is marked by SHYTY. It is an interesting presentation, which gives the original Indian text transliterated into Aramaic, followed word by word with an Aramaic translation. It contains part of the seventh Pillar Edict of Asoka. The end of the Kandahar inscription appropriately has in Aramaic alone “[These orders] were set to writing on pillars”.

### *Historical Significance*

The discovery of this important group of inscriptions of Asoka from Laghman and Kandahar gives us a clear picture of the western extent of the Mauryan empire, and its control of Arachosia. The Greek inscriptions, in form and style, belong to the high Hellenistic period and are the same as one would find elsewhere in the Greek world at this date—impressive evidence for the unity of Greek culture in the third century B.C. Greek colonists at Kandahar still constitute an important nucleus of culture under the Mauryans, in touch with the main Greek world; and it is to them that the preaching of Asoka’s edicts in Greek are directed. But there is equal interest in the Iranian population of the Mauryans—in particular the Kambojas mentioned with the Yonas (i.e. Greeks) in edict XIII as peoples to whom Asoka sent missionaries.

## Discoveries at Ai Khanum

### *Greek Inscriptions in Bactria*

The first Greek inscription (other than those on coins) from Bactria was the potsherd with ΑΤΡΟC discovered by Schlumberger (1947: 241–3) at Tepe Nimlik—35 km west of Balkh in 1946. The subsequent excavations at Ai Khanum have produced three well preserved inscriptions—important evidence for the pure Greek character of the city in its language, culture and system of education in Bactria.

### *The Inscriptions of Clearchus*

Inside the walls of Ai Khanum in the pronaos of the funerary monument of Kineas, who seems to have been the founder of the city, the base of a stele (Fig. 4.6) was discovered *in situ* with two texts of the third century B.C. (Bernard, 1967: 317–8; Robert, 1968: 421–457). One in cursive script describes in two elegaic couplets how Clearchus had erected in the temenos of Kineas a transcript of the precepts at Delphi. He had gone to copy them carefully at Delphi himself. To the right in a different hand is the text of five maxims “As a child be moderate, as a young man be self controlled, in middle age be just, as an old man of good counsel and at death without regret”—an exhortation to acquire the chief qualities of man appropriate to each age of life. The importance of this philosophy to the city is seen from the location—the temenos of its founder. Robert comments aptly on the impressive fidelity to the most authentic form of Hellenism represented by the wisdom of Delphi and on the community of race, language and culture fostered by these remote Greek colonists in a strange environment.



### *The Dedications in the Gymnasium*

In the north part of the lower town a dedication to Hermes and Hercules, protectors of the gymnasium (Bernard, 1967a: 317-9; Robert, 1968: 416-421) was discovered in the wall enclosing a large court—the centre of a traditional Greek establishment for physical and intellectual education. The dedication was made by two brothers Triballos and Strato—both sons of Strato. Triballos is the name of a tribe in northern Thrace, suggesting that the family had had some link with the Macedonian army.

### *Finds from the Necropolis*

The chance find of a fragmentary Greek inscription of funerary character led to the excavation in 1971 of a Greek mausoleum in the necropolis outside the walls. In its northwest vault were three funerary jars inscribed in ink with the names of the deceased whose remains they contained (Bernard, 1972: 608-618)—a small boy and small girl, Lysanias and Isidora, and Kosmas. Here again we have important evidence for the ethnic character of the population. Lysanias is a Macedonian name and Isidora is a theophoric name—interesting evidence for the worship of Isis in the remote north east of the Greek world.

On the approach to the mausoleum were discovered fragments of two funerary inscriptions. One was part of a stele containing the words “Kings”—presumably the tombstone of some dignitary in the royal administration.

### *The Aramaic Ostrakon*

Evidence for the coexistence of a more local culture is to be seen in the ostrakon in Aramaic script discovered in the sanctuary of the temple à redans (see p. 225) in 1970 (Bernard 1972: 631-2). It contains a number of Iranian names, but the absence of any syntax makes it difficult to decide whether it is Aramaic or middle Persian. The central text is an economic document recording the state of a series of payments of the type known from the archives of Nysa. It is probably not so much Aramaic official but the local Iranian language—Bactrian transliterated into Aramaic script.

## Early Kharoshthi Inscriptions

### *The Early Use of Kharoshthi*

Bühler (1898: 48-100) has shown that Kharoshthi letters are derived from Aramaic and its alphabet was elaborated with the help of Brahmi. Kharoshthi was used in the versions of Asoka's edicts at Mansehra and Shahbazgarhi in north Pakistan, while Aramaic was used to transliterate Middle Indian (Prakrit) in the Laghman valley and at Kandahar in Afghanistan. It was used with Greek widely on the coins of the Graeco-Bactrians struck south of the Hindu Kush; but most of the earlier Kharoshthi inscriptions belong to the period of the Indo-

Scythian empire of Maues and the dynasty of Azes, who marked the establishment of their empire on the Indus with a new era—the Old Saka era. This is probably the era of 58 B.C., although Konow (1929: xc–xci) attributes it to 84/3 B.C. and Van Lohuizen (1950: 1–72) to 88 B.C.

### *The Inscription of Tiravharna the Satrap*

The earliest Kharoshthi inscription from Afghanistan seems to be that of the Satrap Tiravharna in year 83—discovered in digging an irrigation channel near Jalalabad (Fussman, 1970: 43–55). It has early letter forms (Fig. 4.7), and belongs to an Indo-Scythian satrap—apparently in A.D. 25, i.e. during the reign of Azes II as King of Kings. This inscription provides proof of the western extension of Indo-Scythian rule to Jalalabad at this time—reinforcing the evidence from some hoards of copper coins of Azes II discovered in the locality.



**Fig. 4.7:** The Kharoshthi inscription of Tiravharna of the year 83 from the neighbourhood of Jalalabad.

## *The Bimaran Vase*

The other early Kharoshthi inscription from Afghanistan was also found near Jalalabad. When Masson excavated the relic chamber of Stupa No. 2 at Bimaran, 12 km west-north-west of Jalalabad, he recovered a steatite vase containing pearls, beads, a gold casket for relics and four billon coins of Azes with the tamgha of Kujula. The vase has two Kharoshthi inscriptions, one on the lid and one round the body of the vase relating to the relics (Konow, 1929: 50–52). To judge by the coins, the relics were deposited soon after the collapse of Azes II empire, after the first invasion of Kujula, and before the Indo-Parthian conquests; and the inscriptions will then belong to this period of transition.

## Numismatics

### Evidence for Currency and Circulation

Evidence for the coinage current in different parts of Afghanistan during the Achaemenid and Greek periods comes from a variety of sources. We must distinguish isolated coin finds, i.e. coins that have been accidentally lost and so indicate the relative frequency of coins current in that locality at the time of their loss, from hoards i.e. groups of coins that have been collected by someone in antiquity, deliberately concealed and for some reason not recovered by their owner or his family. Some hoards may have been collected over a period of time and are evidence for the currency of the locality over a period rather than for current circulation at the time the hoard was secreted. This will only become apparent on studying the composition of the find.

There is a growing body of numismatic evidence for this period from the excavations at sites such as Begram, Surkh Kotal, Ai Khanum, Hadda and Kandahar (Fig. 4.2); but for many areas we must still rely on coins offered in the local bazaar, private collections formed in that locality and the local museum collections at Mazar-i-Sharif, Herat and Kandahar. Much of hoard material does not come from controlled excavations. The most important hoards have been published, but in several cases information about the discovery is incomplete and only some of the coins originally discovered may have been available for study.

## The Achaemenids

### *Role of the Siglos*

The official currency of the Achaemenid satrapies in Afghanistan consisted as one might expect, of the royal Achaemenid sigloi, but as in other parts of the Achaemenid empire the royal silver sigloi are very heavily outnumbered by Greek coins and their copies—some of a much earlier date from Athens and other Greek cities. Schlumberger (1953: 1–64) has shown that prior to the Macedonian conquest the circulation of silver throughout the Achaemenid empire depended heavily on Greek imports and was normally accepted as bullion—not at its



nominal value. The traditional Achaemenid relation between gold and silver was 1:13·3 and this was the basis of the standard of the gold daric, silver siglos and their official exchange. In Greece the relative value of gold to silver was 1:12 and then 1:10 after Philip opened the gold mines at Pangaeus in 358/7 B.C. This is a strong economic reason why older Greek coins were preferred to the over-valued Achaemenid siglos, until Alexander and the Seleucids reformed the currency.

### *The Oxus Treasure*

The Treasure of the Oxus, containing rich Achaemenid objects of gold and jewellery reached Europe with some 1500 coins ranging from the early fifth century to about 200 B.C. (Dalton, 1905; Schlumberger, 1953: 46–49; Bellinger, 1962: 51–67). The coins fall into two distinct periods—that of the Achaemenid empire and that of the kingdoms of Alexander the Great and his successors. Schlumberger has studied the prehellénistic coins of the Oxus Treasure that remain in the British Museum and has shown that in containing old Greek silver and its imitations from Athens, Acanthus, Byzantium etc., it follows the pattern of other Achaemenid hoards. Among the silver hoards of Achaemenid date known to him from all parts of the Empire, five contained Achaemenid sigloi only, ten contained both sigloi and Greek silver and more than 44 contained Greek silver but no sigloi.

### *The 1966 Balkh Hoard*

The hoard of more than 170 old Greek coins found in a pot in the neighbourhood of Balkh in 1966 conforms to this pattern. (Troxell and Spengler, 1969: 1–19). It contained 150 Athenian tetradrachms and coins from some 13 other Greek cities that suggest a burial date c. 380 B.C.—but no sigloi.

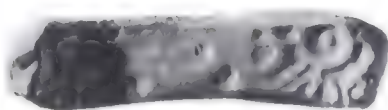
### *The Chaman-i-Hazuri Hoard*

The Chaman-i-Hazuri hoard from Kabul was discovered in 1933 by workmen digging foundations for a house (Schlumberger, 1953: 31–45). Of the 1000 or so coins it contained Schlumberger has been able to recover and publish 115. The striking feature about the hoard is the large number of Greek silver coins, 34 from Athens and 30 from other Greek states and the small number of Achaemenid coins, simply eight sigloi—reflecting the recurrent pattern in Achaemenid hoards throughout the empire. Most of the Greek coins can be dated fairly closely and there is no reason to place any of them later than 400 B.C. although a copy may be derived from an Athenian prototype of 394/3. This, with the absence of Macedonian and Hellenistic coins suggests a burial date in the mid fourth century B.C. The remaining silver pieces are bent bar silver coins—mostly of about 11·7 g and local silver punched coins of a completely new type with a full denomination ranging from 9 to 12 g. Bent bar coins provided the silver currency of Taxila and the Achaemenid satrapies of northwest India before the invasion of Alexander the Great. Examples are recorded from Charsada and the Bhir Mound excavations at Taxila in Pakistan. Two hoards containing them have been reported from Bhir

Mound, and a third from Bajaur, also in Pakistan. From Afghanistan, in the deposit from Mir Zakah near Gardez there were 50 bent bar silver coins and 550 of the round (sometimes scyphate) single type silver that seemed to constitute the three-quarters and one-eighth denomination of the series.

### *Other Hoards of Bent Bar Coins*

Two hoards of bent bar silver coins are known to have been found in recent years in Jalalabad province. The Kabul Museum has 12 out of a total of some 50 bent bar silver coins found at Khugjani near Jalalabad in 1962 (Fig. 4.8); and a second hoard of some 100 bent bar coins, all of the same type, was found on the outskirts of Jalalabad by workmen digging the foundations for a building in 1970 (Fig. 4.9). In weight bent bar coins are double the weight of the Achaemenid royal siglos; chronologically they belong to the fourth century B.C., the last century of Achaemenid rule; and their presence at Kabul, Gardez and Jalalabad as well as at Taxila and Charsada suggests that they were made for currency in the easternmost Achaemenid satrapies. The new type silver punched coins in the Chaman hoard are very puzzling. They have the thick roundish fabric of Greek coins – not the flat square or oblong flans of Indian currency. Their general appearance, incuse punch, concave reverse and convex obverse again seems Greek although there is little Greek about their types. Their full denomination ranges in weight from 9 to 12 g and they are less worn than the bent bar coins in the hoard. We should therefore regard them as a local product subsequent in date to the long bent bar variety in the Chaman hoard, but owing more in fabric and appearance to the worn Greek silver present in the hoard. Finally the Chaman hoard contains fragments of silver bracelets and jewellery—one with two cuneiform characters that are Elamite letters. We should therefore regard the Chaman hoard as a treasure valued for its bullion like other Achaemenid hoards but reflecting also the silver readily obtainable in south east Afghanistan at the time.



**Fig. 4.8:** (left) Bent bar silver coin of late Achaemenid date from the 1962 Khugjani hoard. (Reproduced, same size.) Kabul Museum.

**Fig. 4.9:** (right) Bent bar silver coin of late Achaemenid date from the 1970 Jalalabad hoard. (Reproduced same size.) Pte. Collection, Kabul.

## Changes Due to Alexander

### *Alexander's Currency Reform*

The conquests of Alexander the Great led to a major change in the pattern of the currency of the near east. In a major currency reform he introduced throughout the empire a new coinage



based on the realistic value of gold to silver of 1 to 10 that Philip II had introduced to Macedon instead of the archaic ratio of 1 to  $13\frac{1}{2}$  retained by the Achaemenids from an earlier period. He struck a gold stater of Attic weight and a silver drachm on the Attic standard that was tariffed at 20 drachms per gold stater. His purpose was clearly to establish the use of imperial coined money (not bullion) through the empire and the weight standard was well chosen in view of the wide popularity of Athenian silver coin as bullion through the Persian empire.

The new imperial currency rapidly became the standard and was followed by the successor state of the Seleucids and later the Bactrian Greeks. In the numerous hoards of Hellenistic date coins of the period prior to Alexander are hardly ever found. When the state issued a plentiful currency and gave a realistic value to its own silver coinage, avoiding the overvaluation that had developed under the later Achaemenids, there was no occasion to prefer old coins traded as bullion.

### *Later Element of the Oxus Treasure*

The later stratum of the coins of the Oxus Treasure reflect this with about 100 tetradrachms and 100 drachms of Alexander the Great, followed by coins of Alexander's successors, Seleucus I, Antiochus I and Antiochus II among the Seleucid kings of Syria and Diodotus I among the first independent rulers of Bactria.

## Mauryan and Graeco-Bactrian Coinage

### *The Overall Pattern*

For the Mauryan and Graeco-Bactrian periods the pattern of currency reflects the successive stages of political suzerainty. Gandhara, Arachosia and the Paropamisadae were initially Mauryan provinces, and used the Mauryan silver and copper punch-marked coinage. North of the Hindu Kush mountains in Bactria we find first a Seleucid then a Bactrian currency following the Attic weight standard with fine Greek portraits and reverse types using Greek legends only (Fig. 4.10). When the former Mauryan provinces were captured by the Bactrian Greeks, we see a new bilingual Indo-Greek coinage with legends in Greek on the obverse and Kharoshthi on the reverse (Fig. 4.11), struck to a new reduced Indian weight standard, with copper coins of the square Mauryan type (Fig. 4.12).

### *The Mir Zakah Deposit*

The Mir Zakah Treasure (Curiel and Schlumberger, 1953: 65–91) consisting of more than 11,000 Indian, Graeco-Bactrian, Saka and later coins was discovered in 1947 in a village 53 km north east of Gardez on one of the old routes linking Ghazni and northern Arachosia with Gandhara. Most of the coins were in silver. There were 50 bent bar coins and 563 round scyphate and minuscule punched coins of ancient India, 4820 punch-marked silver coins, 2012 Graeco-Bactrian drachms (compared with six tetradrachms), 3335 Saka drachms

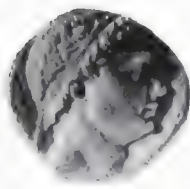
(against 13 tetradrachms). The find included much smaller numbers of copper coins of these periods and of the Indo-Parthians and Kushans. The French excavations of 1948 (Curiel and Schlumberger, 1953: 92–99) established that the place of discovery had been two sacred tanks or basins, into which offerings, notably coins, had been thrown. This explained the presence of a variety of votive offerings and items of jewellery, the enormous chronological range of the coins extending over five centuries, the excellent state of preservation of some of the oldest coins present in the hoard and the very heavy predominance of smaller silver denominations. The coins from this excavation showed the same general pattern as the coins recovered the previous year for the Kabul Museum. The treasure is therefore a deposit, not a currency hoard, and provides extremely important evidence for the currency of Gardez and its locality over the whole period. We see the substantial role played by the punch-marked silver (the silver currency of the provinces of the Mauryan empire) and its replacement by the bilingual Greek and Kharoshthi silver drachms struck on the Indian standard when the Graeco-Bactrian kings conquered the former Mauryan provinces. This in turn was replaced by the bilingual Greek and Kharoshthi Saka coinage of Azes I, Azilises and Azes II, as at Taxila. On the other hand the silver drachms of the Parthian and early Indo-Parthians are conspicuously absent—with only three examples in all. Copper coins are less numerous than the silver, but may be an even better guide to political suzerainty in the area as their circulation was much more restricted than silver. There were 78 Mauryan copper coins of the square Taxila type in the deposit and 54 bilingual square Graeco-Bactrian coins, compared with three bilingual round copper coins, and three Greek monolingual coppers from Bactria. The coppers of Apollodotus I (22) are most heavily represented, followed by Pantaleon (9) and Eucratides (10).

### *Finds from Begram*

During his residence in Afghanistan, Charles Masson discovered that large numbers of coins were constantly being found on the plain of Begram near the confluence of the Ghorband and Panjshir rivers in the Kohistan 60 km north of Kabul. During 1833 he purchased 1879 ancient coins, mostly coppers, and in the following four years he collected many more. He described his 1833 finds in some detail (Masson, 1834: 152–175) and gave an enumeration of the total collected from Begram in 1833, 1834 and 1835 (Masson, 1836: 537–547). This important evidence is reinforced by the much smaller number of coins from the French excavations at Begram in 1941, 1942 and 1946 (Ghirshman, 1946: 85–90) now in the Museum at Kabul. These excavation coins show the same basic pattern as the Masson surface finds. We can therefore check details from the excavation coins and use its evidence in conjunction with the statistical evidence of the Masson finds.

More than 80% of the Graeco-Bactrian copper coins from the French excavations prior to the collapse of the silver denominations under Hermaeus are square, bilingual Greek/Kharoshthi copper coins. Among Masson's finds there are some 600 Graeco-Bactrian copper coins of this period. The denomination of the 78 Mauryan square copper coins is copied by the 43 square coppers of Agathocles and seven of Pantaleon, and the later stages of the same square denomination is seen in the 268 square coins of Eucratides, 73 of Apollodotus

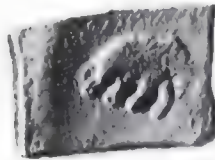
1



2



3



4



5



**Fig. 4.10:** (1) Gold Stater of Graeco-Bactrian king Diodotus (late third century B.C.). British Museum. (2) Silver Attic tetradrachm of the Graeco-Bactrian king Antimachus (early second century B.C.) with reverse type of Poseidon holding a trident. Herat Museum. (3) Square silver coin of the Graeco-Bactrian king Antimachus (early second century B.C.) from the Mir Zakah hoard, with the figure of an elephant on one side, and a thunderbolt on the reverse. Kabul Museum. (4) Silver tetradrachm of the Graeco-Bactrian king Lysias (second century B.C.) with the king wearing an elephant's scalp headdress and with a standing figure of Hercules crowning himself on the reverse. British Museum. (5) Copper coin of Euthydemus II (second century B.C.) with a laureate head of Apollo. British Museum. (All coins shown in Figs 4.10–4.21 are reproduced actual size, except for Fig. 4.13).



**Fig. 4.11:** (1) Square silver drachm of reduced Indian weight struck by Apollodotus I, with an elephant and Greek legend on the obverse and a humped bull and Kharoshthi legend on the reverse. Pte. Collection. (2) Silver bilingual Indian drachm of Menander (later second century B.C.) with a reverse figure of Pallas holding an aegis and thunderbolt. Pte collection. (3) Silver bilingual Indian drachm of Menander with the owl reverse type. Pte Collection.



**Fig. 4.12:** Square copper coin of Pantaleon with the figure of a leopard in an incuse square (second century B.C.) British Museum.

1 and 153 of Menander, followed by the 37 of Antialcidas and 14 of Lysias. We see how the square copper bilingual copper denomination in this period was initially derived from the Mauryan and then progressively modified.

The silver currency of the Hazarajat is seen from the hoard of 120 Graeco-Bactrian silver drachms of the Indian standard purchased at Charikar (Masson, 1836: 537–547). It consisted of seven square coins of Apollodotus I, 5 round coins of Antimachus and 108 of Menander—similar in composition to the 1926 Gang hoard and the 1942 Bajaur hoard—both from modern Pakistan. The 1942 Bajaur hoard is remarkable for the presence of some 700 bent bar and punch marked coins with 800 Indian drachms of Apollodotus I, Antimachus and Menander—a treasure in which Indian standard drachms are hoarded with the Mauryan punch marked silver, from which their metrology is eventually derived. A later stage in the silver currency of the Upper Kabul valley is to be seen in the 1923 hoard of 97 Graeco-Bactrian drachms of the Indian standard of later kings down to Hermaeus (Whitehead, 1923: 325).

### *Excavated Coins from Ai Khanum*

The discovery of two non-struck coin flans of Seleucid or early Bactrian Greek fabric in the French excavations at Ai Khanum in 1968 (Bernard, 1969: 354) suggests that there may have been a local mint for copper coins—either official or unofficial in the city. The series of excavation coins discovered since 1965 (Bernard *et al.*, 1973: 203–5; Bernard, 1971: 446–7; 1972: 631) now provide clear evidence for the currency of eastern Bactria. The copper coins of the Seleucid kings Seleucus and Antiochus I are succeeded by coins of the independent Graeco-Bactrian kings Diodotus, Euthydemus and Eucratides, mostly monolingual Greek coins of the Attic/Seleucid system, but with occasional bilingual Greek/Kharoshthi square copper coins of Eucratides amounting to between 5 and 10% of the Graeco-Bactrian coppers found. There is evidence of trade with provinces south of the Hindu Kush in the two punch-marked Mauryan silver coins found (in addition to the Graeco-Bactrian Attic standard silver coins one would expect), in the 1970 hoard of Mauryan punch-marked silver and in the presence of three bilingual tetradrachms among the 63 silver coins in the 1973 hoard.

The hoard of 679 Indian and Indo-Greek silver coins found in the 1970 excavations has been fully published by Audouin and Bernard, (1973: 238–289; 1974: 7–41). The hoard was discovered in a traveller's water flask—far too large really for the number of coins concealed. It had been hurriedly buried c. 130 B.C. by the latest inhabitants of Ai Khanum at the time of a nomad invasion, but the hoard itself had been assembled over a relatively short time some 40 years earlier. Punch-marked silver coins and the Indian standard bilingual Indo-Greek silver drachms were the currency not of Bactria but of the provinces of the Mauryan and former Mauryan empire. There is no doubt therefore that this treasure represented an import by way of trade from Gandhara. The 673 punch-marked silver coins were all of Mauryan date from the mint of Taxila. As in the 1912 Taxila hoard (Walsh 1939) there were no pre- or post-Mauryan punch-marked coins. They all have the hill, symbolized by three arches surmounted with a crescent, that seems to be the dynastic emblem of the Mauryan kingdom. The six silver coins of Agathocles are of a completely new type and are bilingual—with a figure of the god





**Fig. 4.13:** Square silver bilingual coin of Agathocles (early second century B.C.) from the 1970 Ai Khanum hoard with a figure of the god Sankarshana on the obverse and of Vasudeva Krishna on the reverse. (Reproduced  $\times 2$ .) Kabul Museum.

Sankarshana and Agathocles' name in Greek on the obverse and the god Vasudeva Krishna and a Brahmi legend on the reverse (Fig. 4.13). Their square shape and method of manufacture is closely modelled on the square punch-marked silver with which they were found. The weights of the coins (four of which are struck from the same obverse and reverse dies) range from 2.3 to 3.3 g, the same broad weight range of the punch-marked silver coins in the hoard. In several of his Indian copper coinages Agathocles copied the local denominations he found already in circulation; and in this hoard we see the same process and the origin of the Indo-Greek bilingual drachm, copying the denomination of the Mauryan punch-marked silver that the Graeco-Bactrians found current in their new territories south of the Hindu Kush. Apollodotus I, while retaining the square shape of the bilingual silver Indian drachm, subsequently stabilized its weight at the bottom of this weight range at about 2.45 g, and this was acceptable for parity of value with the punch-marked silver because of the consistently high silver content of the Indo-Greek coins. Subsequent kings retained this standard for the bilingual drachms but reverted to the round silver flan normal for Greek moneyers.

The 1973 Ai Khanum hoard, also found during the French excavations (Bernard, 1974: 280-308; Bernard, 1975: 58-69; Petitot-Biehler, 1975: 23-57) contained seven Alexander and seven Seleucid tetradrachms with 49 Attic tetradrachms of the Graeco-Bactrian kings who ruled north of the Hindu Kush up to Eucratides (but excluding Heliocles). The hoard included a hitherto unknown Attic Tetradrachm of Apollodotus I.

### *The Qunduz Hoard*

The Qunduz hoard (Bivar, 1955; Curiel and Fussman, 1965) was discovered during 1946 in excavating the foundations for an extension of the barracks at Khisht Tepe on the south bank of the river Oxus 90 km west-north-west of Qunduz, on the ancient caravan route crossing the river to northern Bactria and Sogdiana. It contained three Seleucid tetradrachms of Seleucus I, Alexander Hierax and Antiochus I Bala (150-145 B.C.), five magnificent double deadrachms of Amyntas, 17 drachms of Heliocles and 602 tetradrachms of Graeco-Bactrian kings of Bactria. All the coins were struck on the Attic standard with legends in Greek only. Most of the

tetradrachms were of Demetrius II (5), Eucratides I (144) Eucratides II (130) and Heliocles (204). The hoard contained Greek tetradrachms on the Attic weight standard of several Graeco-Bactrian kings previously known solely from their bilingual Greek/Kharoshthi currency on the Indian standard.

Most Graeco-Bactrian coins have Greek monograms in the reverse field that have been the subject of extensive discussion. They are usually composed of two or more Greek letters. Cunningham argued that they stood for the mint of issue, but Tarn maintained that they represented the initials of magistrates or mint masters on the Seleucid pattern. Fussman's die study of the coins in the Qunduz hoard has shown that several coins struck from the same obverse die (i.e. produced in the same mint) have different reverse monograms so the monograms cannot be mint marks. He shows several mint marks found on these Attic tetradrachms obviously intended for circulation in Bactria are identical with mint marks of the same Kings found on their Indian bilingual tetradrachms intended for circulation south of the Hindu Kush. He suggests that they are therefore not the marks of moneyers but of engravers who served more than one mint.

The latest Seleucid coin in the hoard is that of Antiochus Bala, but many of the Bactrian coins seem to be later. One of the latest is probably the tetradrachm of Hermacus, who is known to have been the last Graeco-Bactrian king to issue coins in his own name in the Kabul valley. The date of the hoard's concealment can probably be placed towards the date of the invasion of Bactria south of the Oxus, c. 100 B.C. It was under Hermacus that the Graeco-Bactrian silver currency in the Kabul valley collapsed and was replaced by a copper currency retaining the types that had been used for the silver. The rich silver mines at Al-Panjshir in the Hindu Kush mountains had no doubt supplied silver for the Graeco-Bactrian coinage. This further analysis of the Qunduz hoard suggests that some of the later Graeco-Bactrian kings may have been struck at a common mint both on the Attic standard for their remaining territories north of the Hindu Kush, and on the Indian standard for the Paropamisadae; and the final loss of the northern territories under Hermacus made it impossible to continue working the Hindu Kush silver mines and so led to the debasement of the southern coinage.

### *The Currency of western Afghanistan*

The currency of western Afghanistan during this period can be reconstructed from the evidence of the Tate collection of ancient coins found in Seistan (Rapson, 1904a: 673-680) and from the local museum at Herat. It consisted at first of Seleucid coins then of Graeco-Bactrian coins with Greek legends struck on the Attic weight standard. (Fig. 4.14). Like the currency of Carmania (Rapson, 1904b: 311) it included some local copies – possibly coins of the Sakas. This contrasts, as one would expect, with the currency pattern of Kandahar, where the local museum and first finds from the British Institute excavations suggest that the Mauryan coinage was replaced by Indo-Greek bilingual Greek and Kharoshthi coins on the Indian standard. From the first century B.C. we find Parthian silver drachms at Herat and Kandahar as at Mazar – sometimes countermarked by later rulers – e.g. with the tamgha of Gondophares' dynasty by the Indo-Parthians or the small helmeted head like the figure to be seen on the ordinary coins of Sapadeizes.



**Fig. 4.14:** (1) Imitation of a silver didrachm of Seleucid King Antiochus I acquired by Hughes Buller in Seistan 1904. British Museum. (2) Silver obol of Graeco-Bactrian king, Antimachus acquired by Hughes Buller in Seistan 1904. British Museum.



**Fig. 4.15:** (1) Copper tetradrachm of early Yuch-chi (first century B.C.) with an obverse copying the head of Heliocles and retaining the letters of Heliocles' name to left and right of the horse. British Museum. (2) Copper drachm of same types, said to have been found in northern Afghanistan. Pte. Collection.

## Yueh-chi, Sakas and Indo-Parthians

### *The Yueh-chi Currency of Bactria*

The currency of Bactria after the Yueh-chi conquest in the first century B.C. is far from clear. When the nomads issued coins they copied the denomination and types of preceding Graeco-Bactrian kings, though usually in a debased form. The commonest coins of the Yueh-chi in northern Bactria during the period were the copper tetradrachms and drachms of the barbarous Heliocles (Fig. 4.15) which occur in stratified finds immediately prior to those of Soter Megas and the early Kushans (Pugachenkova, 1967: 74–88). These copper coins are also found in northern Afghanistan. The Kushan Heraeus who seems to have ruled in Bactria at an early date, issued tetradrachms and obols in base silver following the denominational pattern of Eucratides and the Sakas who succeeded him. The later stages of the Kushan currency are discussed in the next chapter.

### *Coins of the Azes Dynasty and Su Hermaeus*

Silver coins of Azes I are found at Mir Zakah and in the hoard from Chaman between Kandahar and Quetta (Jenkins, 1955: 25–26). The Saka empire at this period was centred on the Indus provinces of Pakistan, but during the reign of Azes II they extended their rule to some parts of eastern Afghanistan. A hoard of copper coins of Azes II is reported from a stupa near Jalalabad (Bayley, 1861: 72–78) and a further hoard from Jalalabad was acquired by an Afghan collector in 1970 (Fig. 4.16). Silver coins of Azes II are very common at Mir Zakah and a few are reported from other localities—but not from Begram. Masson explicitly states that he discovered no moneys of the genuine Azes kings at Begram, and his experience is borne out by their extreme rarity among the Begram excavation coins.

The currency of Begram and Kandahar at this period (Fig. 4.17) consisted of the long series of copper tetradrachms and drachms—copying in copper the obverse and reverse types of the earlier silver coins of the last Graeco-Bactrian ruler Hermaeus. It is a long series that gives little clue about the identity of its issuers—but probably represents the currency of the Pahlavas who conquered Arachosia in the first century B.C. (Narain, 1957: 157–162). Arachosia is included in Isidore of Charax list of Parthian provinces at the beginning of the Christian era.

There was a major debasement of the Saka silver currency at end of the reign of Azes II, when his empire began to break up. The old silver denominations were now struck in billon instead of silver and the copper denominations proper largely disappeared; but the principal impact of this was in the coinages of the Indus valley.

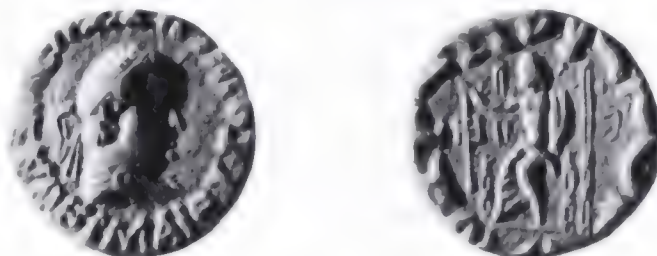
### *The Distribution of Indo-Parthian Issues*

About A.D. 30 the Indo-Parthian king Gondophares established an independent empire that controlled the Punjab, much of the Indus valley, Arachosia and adjacent parts of eastern Afghanistan. His currency in Arachosia consisted of Nike-type copper tetradrachms (Fig.

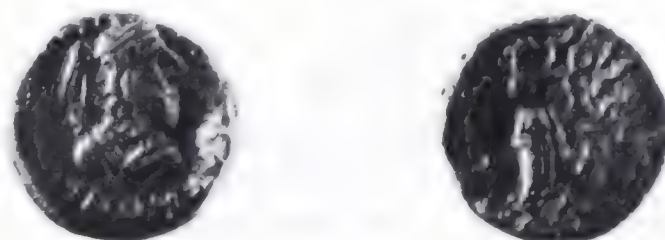




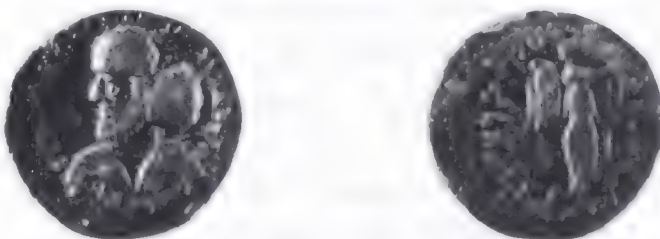
**Fig. 4.16:** Copper coins of Azes II with a humped bull on the obverse and a lion on the reverse (late first century B.C.) from the 1970 Jalalabad hoard. Pte. Collection, Kabul.



**Fig. 4.17:** Copper tetradrachm (first century A.D.) copying the types of the silver tetradrachms of Hermaeus. Kabul Museum.



**Fig. 4.18:** Copper tetradrachm of Indo-Parthian King Gondophares I (first century A.D.) with the reverse type of victory holding a wreath. Pte. Collection.



**Fig. 4.19:** Copper tetradrachm of Indo-Parthian King Pacores (late first century A.D.). Pte. Collection.



**Fig. 4.20:** Indo-Parthian silver drachm of Abdagases, with the reverse type of a seated archer copied from the Parthian drachm type. British Museum.



**Fig. 4.21:** Copper drachm of late Indo-Parthian type, retaining the seated archer reverse. British



4.18), based on the copper tetradrachm struck in the name of Su Hermaeus, and these coins are found at Begram, Hadda and Mir Zakah. His successors lost these territories and the Indus valley to the rising power of the Kushans, but later copper tetradrachms in the Nike sequence are known from Seistan for Orthagnes, Pacores (Fig. 4.19), a second Gondophares and Sanabares (Mac Dowall, 1965: 137–148) ruling territory in the west during the period of the main Kushan dynasty. The latest issue in this sequence has a Pahlavi legend which has been tentatively read as Arda Mitra. It has a Sasanian fire altar of the type used by Ardeshir I and seems to have been a provincial currency for Seistan at the time of his eastern campaigns.

For several kings of the Indo-Parthian dynasty very rare silver drachms of Parthian type are known (Fig. 4.20). The series eventually suffer a serious debasement and later kings have debased drachms with the same types struck in copper (Fig. 4.21)—a coinage which is common in Merv and sometimes encountered in Herat.

## Settlement, material culture, architecture and art

The regions that are included within the boundaries of modern Afghanistan were involved in the political events of Mesopotamia even before Bactria (which corresponds to northern Afghanistan and part of the Central Asian republics of the USSR, north of the Oxus/Amu-darya) was annexed by the Iranian empire under the Achaemenian dynasty in the time of Cyrus the Great, along with Drangiana (modern Seistan), Aria (the region of Herat), Arachosia (the region of Kandahar), as well as the territories farther east, as far as Gandhara (Fig. 4.1).

Nevertheless archaeological documentation from Afghan territory, concerning the Achaemenian period, is so scarce that the most useful evidence for that period in Afghanistan is yielded by excavations and finds in neighbouring countries, principally Iran, but also the Soviet Union and Pakistan. Three areas may be distinguished, each with its own characteristic features.

First, the Bactrian area, which covers parts of Uzbekistan and Tajikistan (among the most recent contributions, see Pidaev, 1974) and the northern part of Afghanistan between the Amu-darya and the Hindu Kush. Remains of the Achaemenian period were recently located in this area by the Afghan-Soviet Archaeological Mission: among them, “a town of which the fortifications and a citadel are clearly recognizable” (Kruglikova and Sarianidi, 1971: 20). The researches of the Afghan-Soviet Mission are only beginning; but they may be expected to throw light on the Achaemenian period in Afghanistan, a period in which the contacts between Bactria and the empire of the Great King also involved a Greek component (Kuz'mina, 1974). These links between the Greek world and Bactria were later to be much strengthened, as we shall see.

Some precise data have already been acquired thanks to the excavations at Tillya-tepe, where the upper layers which are as late as 500 B.C., have yielded “Achaemenian” pottery and show connections also with Nad-i Ali II (Sarianidi, 1972). Achaemenian layers were also recognized at Balkh (Gardin, 1957a: 93).

More interesting from the point of view of monumental architecture is the Bactrian site of

Altin-10, where the Afghano-Soviet Archaeological Mission has been working since 1971; two buildings there appear to be of the greatest importance and show links with the architecture of Dahan-i Ghulaman (for which see below): a rectangular "summer palace" (No. I),  $80 \times 55$  m, divided into two "palaces" with a fourteen-pillar portico on either side (Fig. 4.22), and a square building (No. II),  $36 \times 36$  m, with rooms arranged round a central courtyard from which they are separated by a corridor running on three sides (Sarianidi, 1953, 38–40) (Figs 4.23, 4.24).

We cannot consider the celebrated Treasure of the Oxus (Dalton, 1905; Barnett, 1968), now in the British Museum, as an Afghan find, since its find spot, though uncertain, is most probably to be located near Kobadian (Mikojanabad), i.e., north of the Amu-darya, in territory now belonging to the Soviet Republic of Tajikistan (Barnett, 1968: 36 f.n.5; Belenitski, 1968: 58–59). The Treasure of the Oxus is to be viewed in the context of the trade activity that crossed Bactria. This was a source of gold for the Persian empire, though Bactria did not actually produce any gold. Bactrian gold came mainly from Siberia and Bactria acted only as a entrepot; this transit traffic apparently ceased in the Graeco-Bactrian period (Tarn, 1951: 105 ff.; Narain, 1957: esp. 25–26; Barnett, 1968: 42 and 51).

A second area in which Achaemenian remains are exceptionally important is ancient Drangiana (Zranka of the Achaemenids), corresponding to modern Seistan; here too, in spite of the careful surveys carried out in the course of several campaigns by a German Mission on the Afghan side of Seistan (Fischer, 1969, 1971, 1973; with earlier bibliography), most of the monuments known so far have been discovered in Iranian territory. Here an Italian Archaeological Mission has brought to light a real town (near Qala-i nau), built near one of the branches of the Helmand river delta, with a precise and carefully planned layout. Though there is evidence of restoration and rebuilding, this town was short-lived and probably died when it was abandoned by its inhabitants as a consequence of some natural event that modified the environment, maybe a change in the river bed. Exploration and excavation have revealed the existence of private houses and seven large buildings, three of them being certainly public in character, all to be dated to the sixth to fifth century B.C. The large buildings had probably civil, administrative, religious and military functions. The ruins of this town are known as Dahan-i Ghulaman (or Dahane-i Ghulaman—Scerrato, 1966, 1974, with a complete bibliography). The buildings were made of mud bricks and pakhsa, or pressed earth, and slightly carinate-vaulted structures were obtained by means of two opposed rows of curved mud-brick struts. This is an important feature that seems to contrast with the principles of Achaemenian architecture to such a degree that the presence of arches has often been used as a criterion to post-date buildings which could have otherwise been placed in the Achaemenian period (but see now, for other examples of this technique, Roaf and Stronach, 1973: 138, where Dahan-i Ghulaman is inexplicably ignored). The plans of the seven larger buildings are also noteworthy: they have a large central court, sometimes diversified by a portico, and show the adaptation to local requirements of architecture found also in the central regions of the Achaemenian empire.

The territory of Afghan Seistan certainly depended on this administrative town (maybe the Zarin recorded by Ctesias), the only great provincial centre of the Achaemenids known to us.

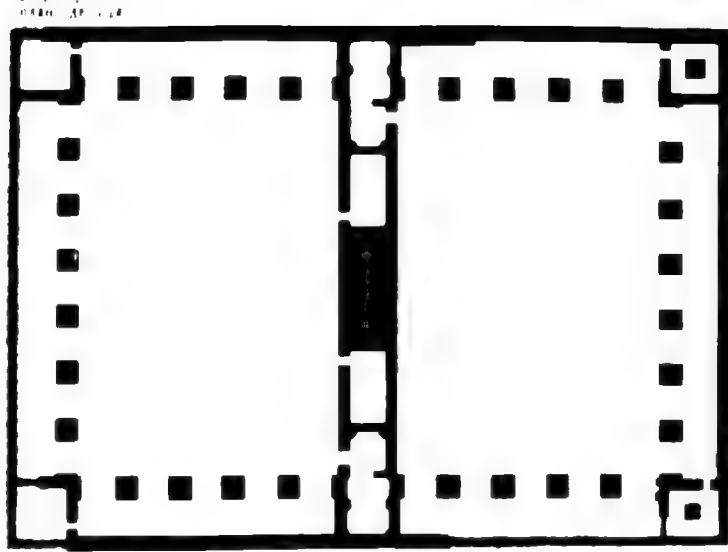


Fig. 4.22: Altin-10. Plan of "palace" no. 1.

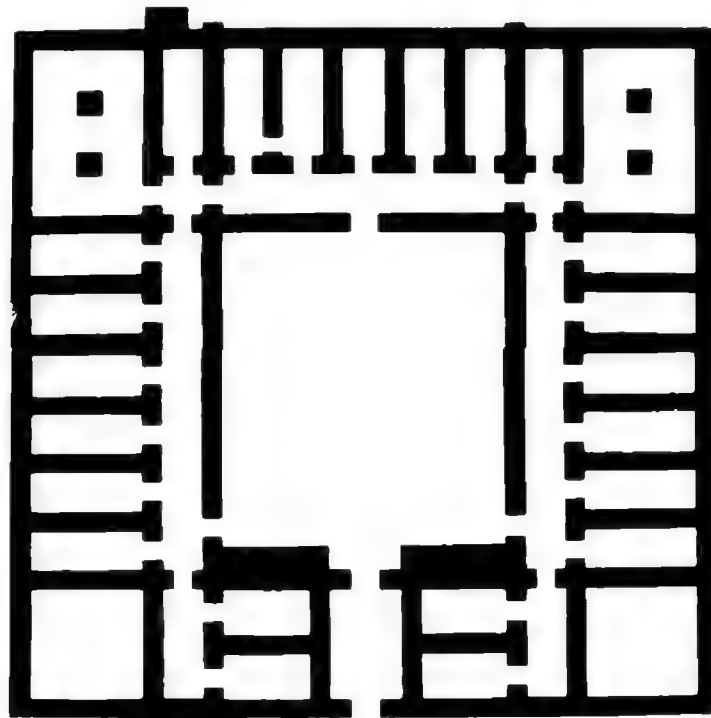


Fig. 4.23: Altin-10. Plan of building no. 2.

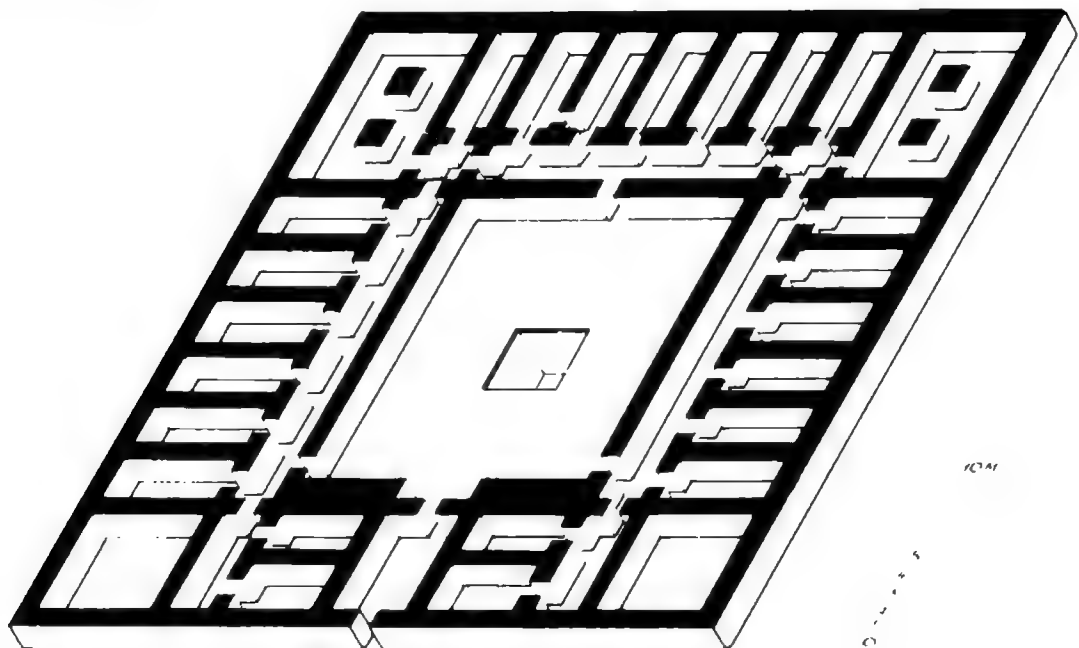


Fig. 4.24: Altin-10. Isometric view of building no. 2.

The most interesting results for the Achaemenian period in Afghan Seistan were obtained by a French Mission led by J. Hackin in 1936 and an American Mission led by W. A. Fairservis in 1949-50. The former executed some small-scale excavations at Nad-i Ali, where R. Ghirshman was able to identify two periods, the later of which (Period I) was attributed to the Achaemenian age (Ghirshman, 1939). An important guide-line is provided by the pottery from Nad-i Ali, to which that found there by Fairservis is to be added (Fairservis, 1961); Scerrato recognized the homogeneity between the Achaemenian pottery from Afghan Seistan (not only Nad-i Ali I, but also Nad-i Ali II) and that of Dahan-i Ghulaman.

Achaemenian pottery was also collected by a British Mission in 1966 both in Seistan and further upstream in the Helmand valley, though apparently in extremely small quantity (Hammond, 1970).

The most important fact is that analogies (which cannot surprise us when we consider the geographic proximity of the two sites) are found in the most common wares, from the point of view of temper and shape as well as of the few decorative patterns. Among the latter the presence of a characteristic incised device in the shape of an inverted trident surmounted by a circle is worth notice.

The most frequent pottery types at Nad-i Ali are yellow or red-clay jars, flat-bottomed beakers with incised decoration, small greyware pots, bowls, and large lids with incised decoration; at Dahan-i Ghulaman we find frequent carinated bowls, flat-bottomed oval jars, cylindrical-conical beakers, and a peculiar type of large basin with rounded rim and "trumpet" base suitable for inserting into the ground: of these, the carinated bowls and the huge basins are not among the Nad-i Ali materials published by Ghirshman but were collected from the same site by Fairservis.

This Seistan material therefore shows a fair homogeneity, and the differences may be due to the different conditions in which the material was collected: regular excavations at Dahan-i Ghulaman, small-scale trial-trenches or surface collection in Afghan Seistan. On the whole, and for some particular correspondences, the Seistan material can be compared with the Bactrian material of Kobadian I attributed by D'jakonov to the Achaemenian age and that of the corresponding levels of Balkh, in northern Afghanistan, and Afrasiab, Sogdiana (Scerrato, 1966, 26-30, with bibliography; a useful synoptic table is in Vorob'eva, 1959, 75).

Period II at Nad-i Ali also saw the construction of a brick building, a corner of which was excavated by the French Mission. It was a massive construction which was probably built against the natural mound in order to make available a larger area. The outer walls were of mud bricks ( $35 \times 35 \times 9$  cm), while the inner structure was made up of alternating unbaked and baked bricks ( $57 \times 28 \times 9$  cm), resting on a basement consisting of ten layers of baked bricks.

The Achaemenian period is even less documented in the eastern regions of Afghanistan. Here we may recall the coins found at Chaman-i Hazuri, Kabul: they are Achaemenian, Greek and local (bent-bar) coins, buried at the beginning of the fourth century B.C., and evidence of trade in the Kabul valley (Schlumberger, 1953). This is very little indeed, if we compare the much richer documentation on the Achaemenian period obtained from the sites beyond the Khyber pass, in Pakistan territory, i.e., Charsada and Taxila. Charsada was probably the capital of the satrapy of Gandhara, added to the empire either by Cyrus himself or in the first years of the reign of Darius I (Wheeler, 1962); Taxila, which merged into the empire at approximately the same time and before Darius conquered the Indian satrapy, including

eastern Punjab and Sind, threw off Achaemenian domination probably in the time of Artaxerxes II (404–359 B.C.). The Achaemenian town of Taxila may be identified with the earliest levels of the Bhir Mound excavation (Marshall, 1951; Sharif, 1969), dated by Marshall to the sixth to fifth centuries B.C. This was a particular aspect of the town, one of its richest quarters: nevertheless the plan is irregular, the building technique poor, in comparison with the upper, post-Achaemenian layers. It is to be observed that soak-wells existed, one in almost every house, from the Achaemenian period onwards.

It will only be possible through new excavations to answer the question of whether the scarcity of data for the Achaemenian period in Afghanistan is due to the lack of field-research or to an actual extraneousness of the region (with the exception of some centres connected with trade) with regard to the cultural trends and the administrative network of the Achaemenids.

Only a few years ago Alexander's expedition, the Seleucid domination and the consequent formation of the Graeco-Bactrian kingdoms appeared to have left very few, though not meaningless, traces in Afghanistan. The problem of Graeco-Bactrian art was felt to be urgent because it was evident that only with its solution could the paradox of the "Graeco-Buddhist" art of Gandhara be placed in an exact historical perspective, a paradox that obviously could not be ignored. If on the one hand it was not possible to date the birth of this art back to the years of the Macedonian conquest, on the other hand no one could really believe that the only antecedents were a few toreutic works (mostly of uncertain date) and the beautiful coins of the Graeco-Bactrian kings. (The most important books on the history of Bactria are Tarn, 1951 and Narain, 1957.)

Today we cannot really say that many archaeological data concerning the period of the Macedonian conquest and Seleucid domination are available to us; nevertheless some recent discoveries have thrown an altogether fresh light on the history of Afghanistan in the period that immediately follows the Seleucid domination—the discovery at Kandahar in 1958 of a bilingual (Greek and Aramaic) inscription of the Indian emperor Asoka Maurya, which is dealt with in another section of this chapter (two more inscriptions of Asoka were later discovered at Kandahar and in Laghman), and the even more important discovery of a Greek town at Ai Khanum: the excavations were started by the French Archaeological Delegation (DAFA) in 1965, after two seasons of careful survey, and are still in progress (Bernard, 1972; 1973, with earlier bibliography p. 5; 1974a; 1975; Bernard *et al.*, 1976; Bernard, 1976).

## The Greek City of Ai Khanum

Ai Khanum is a site in the north-eastern part of Afghanistan, close to the confluence of the Kokcha and the Amu-darya (Oxus). Here a Greek town has been discovered, presumably to be dated to a period from the end of the fourth century to c. 100 B.C. (fig. 4.25). The excavations have revealed the existence of a fortification system, private as well as public buildings, and a necropolis. Ai Khanum is the Turkish name of the nearby village, meaning "Lady Moon"; the ancient name is unknown, nevertheless there is very good reason to suppose that Ai Khanum is the Alexandria Oxiana of the classical sources, though this is placed by others at Termez, on the north bank of the Oxus.



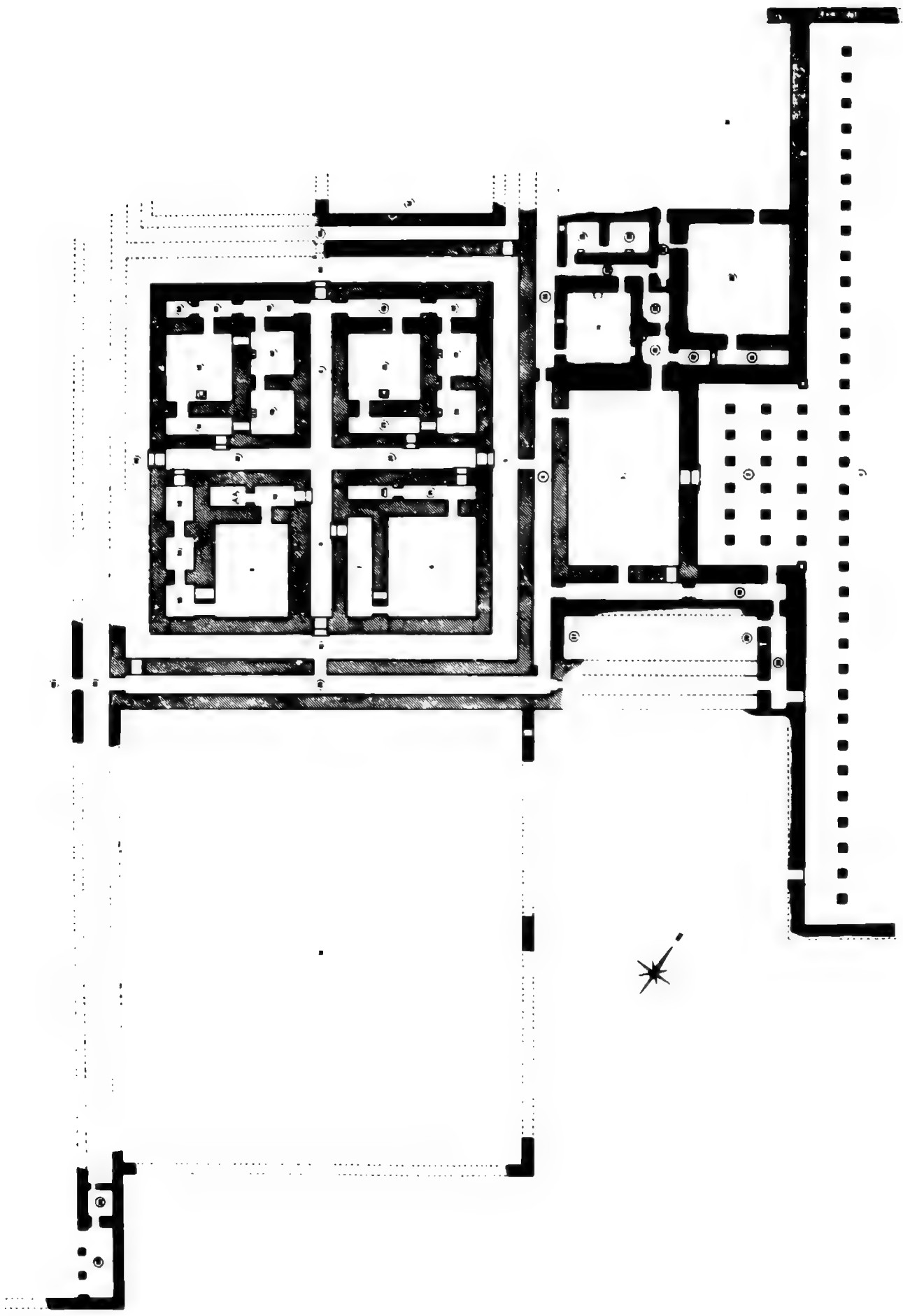


Fig. 4.25: Ai Khanum. Plan of city. (After Schlumberger, 1970.)

The town occupies a naturally fortified position, protected by the Oxus, the Kokcha and an acropolis; the whole complex was encompassed by a line of defences provided in places with a moat. In the words of P. Bernard (1967b: 74), "the site was remarkably well-suited to the implantation of a military stronghold which could eventually develop into a large city". We must therefore imagine Ai Khanum posted as a sentinel to guard the natural northeastern gateway of Bactria, between the Oxus and the first slopes of the Badakhshan mountains, against the menace of nomadic invasions.

The lower town, between the acropolis and the Oxus, includes three well defined parts—a habitation area to the south, the administrative quarter in the middle, and an area almost devoid of structures to the north. The main street started from the main gate in the northern wall and ran parallel to the side of the acropolis as far as the Kokcha to the south (actually northeast-southwest).

The technique of construction is mud-brick masonry, sometimes on a basement of baked



bricks; this is an Oriental, rather than Greek, way of building. Also the flat roofs which covered certain buildings were not in the Greek tradition; nevertheless "for everything else, the architectural techniques were Greek: stone blocks laid dry without mortar, tightly fitted by anathyroses and fastened together by metal dowels and cramps sealed by molten lead; flat Corinthian tiles with covertiles, and antefixes at the end of eaves cover-tiles" (Bernard, 1967b: 78). Columns and some of the thresholds are made of stone, a limestone quarried 50 km southwest of the site.

Bernard has been able to put together the chronological data deriving from epigraphic, numismatic and architectural evidence in a synoptic table (Bernard, 1973: 104), of which we give here only the succession of periods and subperiods:

Period I: 330–303 B.C.

Period II–1: first half of the third century B.C.

Period II–2: second half of the third century B.C.

Period III–1: first half of the second century B.C.

Period III–2: c. 150 B.C.

Period IV: second half of the second century B.C.

destruction by fire, c. 100 B.C.

The administrative quarter (Fig. 4.26) is one of the most important building complexes at Ai Khanum and was named "Palace" in the earlier reports (Bernard, 1969: 314, n.2; indication of the cardinal points in the reports of the DAFA is given in a simplified way—north, south, east and west instead of northeast, southwest, southeast and northwest respectively—here we refer to the real magnetic orientation). It is placed in the central area of the lower town, its northeastern part being occupied by a large courtyard with a peristyle ( $108.11 \times 136.77$  m) consisting of 116 stone columns. These rest on Attic-Asiatic bases, have plain shafts made of drums of varying heights, and support pseudo-Corinthian capitals which probably originated in Seleucid Syria. To be more precise, the bases proper show the typical profile of the Attic bases (i.e. consisting of an upper and lower torus, with a scotia between); the scotia is separated from the lower torus by a fillet, from the upper one by an astragal; the upper torus is connected to the shaft through a fillet and a cavetto. There are also variants of this type.

The courtyard was entered on the northeastern side through a propylaeum with four columns (Fig. 4.27). Their capitals are similar to the capitals of the peristyle, but the bases are completely different, since they are composed of a three-stepped plinth below and a swollen torus above, and have therefore a markedly Oriental appearance; indeed they are similar to some Achaemenian bases, especially those of the Treasury at Persepolis (Schlumberger, 1970: 27).

The southwest side of the courtyard, which faces the propylaeum, is obviously the main facade into which opens a pillared vestibule ( $27.67 \times 16.44$  m) with three rows of six Corinthian columns (Fig. 4.28) resting on Attic-Asiatic bases. The vestibule gave access to a large rectangular room ( $26.02 \times 16.50$  m) decorated with wooden half-columns; farther to the southwest a block composed of two pairs of twin structures symmetrically arranged is probably part of a later extension; the main rooms in the structures to the southeast are



Fig. 4.27: (left) Ai Khanum. Administrative quarter. A capital from the propylaeum.



Fig. 4.28: (right) Ai Khanum. Administrative quarter. A capital from the pillared vestibule.





... of administrative quarter, a room with mosaic floor.



decorated with pilasters surmounted by capitals which seem to be rather poor imitations of the capitals of the peristyle. Both these rooms (Fig. 4.29) were probably employed for cult or official purposes (audience halls?), as is suggested by the finding of fragments of stucco and clay sculptures.

The two structures to the northwest, which were excavated in the campaigns of 1972 and 1973 (Bernard, 1974a: 289 ff.), do not show such large and richly decorated main rooms as do the other two structures: this probably means that they were the seat of the chancellery offices, while the other two served a more official purpose. The residential area of this administrative quarter was partially excavated in 1974 and 1975: the building discovered there shows many similarities with the large private houses of Ai Khanum (Bernard, 1975; Bernard *et al.*, 1976: 6–25); the complex, or rather this part of the complex, has again been styled “Palace” in the latest report (Bernard, 1976: 288–293), as a consequence of these discoveries.

Though the excavation of this functional complex has not yet been completed and we cannot altogether understand the function of each part, Bernard has tried to suggest that the whole complex reflects the diarchical character of the administrative power for which it was conceived. He further expounds three possibilities for the explanation of the nature of such power: (1) The “administrative quarter” is a Palace, a *basileion*, one of those royal residences the Oriental monarchs had built in various parts of their empires for staying during their recurrent visits; the twin structures we have described could reflect the association of the crown-prince to the throne (the joint sezerainty of Eucratides and Heliocles is a particularly reasonable hypothesis, since the date of the southwestern complex, *c.* middle of the second century B.C., approximately corresponds to the reign of Eucratides). (2) The “administrative quarter” was the residence of a governor, head of a satrapy, assisted either by a commandant or by an official of the royal administration (as, for instance, at Susa under the Parthians). (3) A third hypothesis was suggested to Bernard by the suburban villa discovered at Ai Khanum during a later season (Bernard, 1974a: 281–7). When a private house attains the monumentality of this building *extra moenia*, Bernard says, one is naturally led to think that the town of which its owner was a citizen, could easily avail itself of enough money for building such a complex as the “administrative quarter”. In a word, Ai Khanum was a real *polis* with large municipal autonomy within the frame of royal suzerainty. In this case, the two twin units of the southwestern complex could be the seat of the two supreme town magistracies. If this is true, one should also look for the place in which the Council was housed (one cannot imagine a Greek *polis* with no Council or General Assembly): Bernard points to the large room between the pillared vestibule on the southwest side of the peristyle and the architectural complex we have just discussed: its size (27.50 × 17 m) would suit well for a *bouleuterion* (Council Hall). The Assembly, on the other hand, could be gathered in the peristyle courtyard itself (Bernard, 1974a: 289–93).

It is also interesting to note that the various parts of the administrative quarter date back to different periods: the propylaeum and the largest portion of the peristyle belong to Period II<sub>1</sub>, while the pillared vestibule was built in Period II<sub>2</sub> and completed during Period III<sub>1</sub>; the supposed *bouleuterion* also belongs to Period III<sub>1</sub> and the southwestern complex was built, as we have already said, in Period III<sub>2</sub>, *c.* 150 B.C.

Some 40 m northeast of the courtyard a funerary chapel (*heroon*) with four burials was found, that according to an inscription discovered *in situ* was known as the temenos of Kineas. The first phase of construction dates back to Period I, probably to the time of Alexander himself (329–327 B.C.), by whose order Bernard supposes that the otherwise unknown Kineas founded Ai Khanum. He therefore obtained for himself and his descendants the right to be buried *intra muros*, a right that in the early Hellenistic period was granted only to the *oikistes* ('founder of the town').

The most surprising building at Ai Khanum is certainly the so-called temple à *redans*, southeast of the temenos of Kineas (Fig. 4.30). Its name, which we retain here from its military-architectural origin, meaning a triangular salient or bastion, is due to the triple-stepping on the outer face of the walls; these define a row of false niches alternating with them.

It is a mud-brick building c. 19 m square, composed of an oblong vestibule and a smaller cella flanked by two narrow sacristies. In the vestibule, on both sides of the door which leads into the cella, were three mud-brick pedestals that supported clay and stucco statues, fragments of which were found scattered on the ground; a few fragments of stone belonging to the cult statue were found in the cella.

Bernard has proved that this plan derives from Mesopotamian prototypes but was also well known in the Seleucid empire, though the Iranian link is still to be found. Though so deeply Oriental in plan and construction (the only architectural device of Greek origin seems to be the three-stepped *krepidoma*), this temple housed a cult image that was purely Hellenic, at least as far as we can judge from the few existing fragments.

The temple à *redans* underwent several stages of architectural modification: stage V is represented by an earlier construction which was replaced by the temple à *redans*; stages IV, III and II cover the period in which the temple à *redans* was in use as a temple, while stage I marks a late re-employment of the building as a store-house. According to the numismatic data and the pottery, this temple seems to have been built in the first half of the third century (the pre-existing temple of stage V would therefore be as old as the beginning of the third or even the last quarter of the fourth century B.C.), while the modifications it underwent in stage II are either contemporary with or later than the reign of Diodotos, c. 248–235 B.C. (Bernard, 1969: 327 ff.; 1971: 414 ff.). In this respect, one should remember that the use of pottery for the purposes of dating monuments is not easy at Ai Khanum, because of the high degree of stability of pottery types and quality (Bernard, 1971: 429–30). We may point out that the pottery from Ai Khanum shows a close relationship with the Hellenistic pottery of the Graeco-Mediterranean world, from the point of view of both technique and shapes, though some types are peculiar to the Orient (e.g. the 'pilgrim-flasks'). Among the Hellenistic types, 'fish-dishes', hemispherical bowls with ring-foot, and 'Megarian' bowls are noteworthy (Gardin in Bernard, 1973: 121–88, for a classification).

The scope of the present book does not allow us to go into a detailed description of all the monuments that either have been or are being brought to light at Ai Khanum. We are only able to list them: a house in the residential area of the lower town, similar in plan to a Parthian building at Rhagae, the modern Rayy, in Iran (Bernard, 1968: 272–6; 1969: 321–6; 1970: 310–6); the villa *extra moenia* already referred to (Bernard, 1974q: 281–7); a Gymnasium in

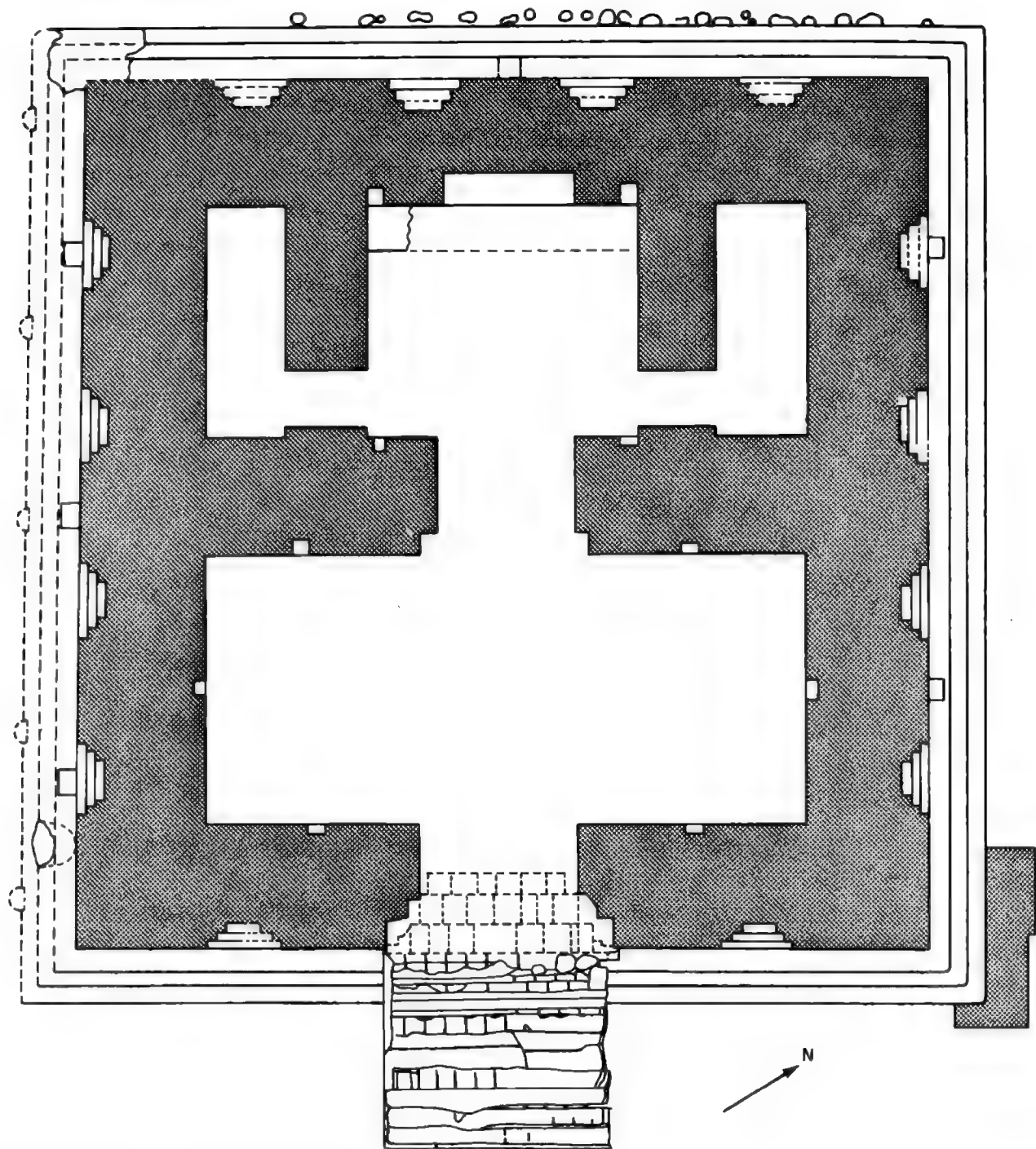


Fig. 4.30: Ai Khanum. "Temple à redans", stage IV.

the northern area of the lower town, which has been identified as such thanks to its peculiar architecture as well as to a dedication to Hermes and Herakles (Bernard, 1967a: 318–9; 1968: 276–9; Robert in Bernard, 1973: 208–11; Bernard, 1975; Bernard *et al.*, 1976: 40–45; Bernard, 1976: 292–302); another *heroon* (Bernard, 1975; Bernard *et al.*, 1976: 25–39); the theatre (Bernard, 1976: 314–22); etc.

Nevertheless a few words must be added concerning the necropolis, due to the enormous importance of this recent discovery (Bernard, 1972). So far, a mausoleum has been brought to light, at the foot of the northeast side of the acropolis, outside the town walls. This is a mud-brick rectangular building, partly underground and with vaulted ceilings, which underwent

several modifications in its structure: a door on one of the longer sides led into a corridor on either side of which opened a crypt; both the corridor and the two crypts were vaulted, but the whole building probably had a flat roof. The mausoleum housed two types of burial mud-brick sarcophagi for inhumations, and funerary jars in which were collected and buried the bones taken from earlier graves, when these had to be destroyed or employed for new burials.

As Bernard rightly points out, the architectural interest of this mausoleum (with its connections with the Parthian necropolis of Assur) is much greater than the importance of the funerary material found in it; nevertheless a schist pyxis decorated with inlaid coloured stones is a very important antecedent of some Gandharan relic-caskets, a fragmentary stone relief representing an *ephebe* raises some interesting iconographic problems, and some ink inscriptions on the funerary jars give us a first hint of the proper names used at Ai Khanum, a field of research of considerable relevance for knowledge of the composition of the population of the town.

Another very important field of investigation, on which the DAFA is now working, deals with the use of canals in the vicinity of Ai Khanum: one of the water-control systems discovered belongs to the period of the Graeco-Bactrian town, and remained in use until the beginning of the Kushan period (Bernard, 1975; Gardin-Gentelle, 1976).

From the point of view of the history of art, especially sculpture, fairly rich documentation is now available at Ai Khanum, as we have indicated (see also Bernard, 1968b; 1970b). It clearly shows at least three stylistic trends: (a) a purely Hellenistic element to be considered alongside the Greek inscriptions, demonstrating the great attachment of the Ai Khanum ruling class to the culture of their far-away fatherland: (b) a group of objects that, though lacking in homogeneity, reflect the stylistic trends of the contemporary Near East and Iran: (c) an element of Hellenistic derivation that shows the beginning of a development towards original solutions, such as those that gave rise to Gandharan art.

To trend (a) belong the fragments of the cult statue (an acrolith) in the cella of the temple *à redans* (Zeus Oromasdes?), third century B.C., (Bernard, 1969: 338–41, Figs 15–16; 1974a: 298); a herm portraying a bearded old man, from the Gymnasium, probably third century B.C., (Bernard, 1967a: 319, Figs 10–11; 1967b: 90–91, Pls XIX–XX); a fragmentary stone plaque (a funerary relief) from the necropolis, which portrays a standing youth wearing chlamys and petasus with long flowing hair, third century B.C. (?) (Fig. 4.31) (Bernard, 1972: Fig. 13); and a terracotta mould for a bust of (?) Demeter (Fig. 4.32).

Two objects at least fall into (b); they are: the silver medallion with representation of the goddess Cybele on a chariot drawn by a pair of lions (Fig. 4.33), probably an import from Syria to be dated to the beginning of the third century B.C. (Bernard, 1970: 339–47, Fig. 31); and the bone figurine representing a nude standing goddess that Bernard (1974a: 302–5 and f.n. 1 on p. 305, Fig. 15) compares with the figurines found in Soviet Central Asia but which seems to be rather closer to a class of statuettes of Mesopotamian tradition from Iran, from the Elamite to the Parthian period (e.g., Ghirshman, 1964, esp. Fig. 6; Pope, 1938–39: pl. 134E).

The third group of sculpture (c) includes: a bronze statuette of a beardless Herakles holding a club and putting a wreath on his head, that Bernard (1974a: 302, Fig. 13) qualifies as of *style rustique*; a headless limestone female statuette from the sanctuary of the temple





**Fig. 4.31:** Ai Khanum. Funerary relief from the necropolis, representing a youth with chlamys, petasus and long flowing hair (third century B.C.).





**Fig. 4.32:** Ai Khanum. Moulding from a terracotta mould representing a female bust (Demeter?) (third century B.C.).



**Fig. 4.33:** Ai Khanum. Silver medallion with Cybele on a chariot; probably an import from Syria (third century B.C.).

à *redans*, leaning on a pillar, very close to Hellenistic models from a typological point of view (Bernard, 1972: Fig. 15) but certainly provincial in style and pointing towards "Gandharan" solutions; two heads (a female made of unbaked clay, and a male of stucco) from the vestibule of the temple à *redans* (Bernard, 1969: 344, Figs 19–20), which are probably the most evident link between the Hellenistic products and the later unbaked-clay sculptures of Khalchayan and Gandhara, especially Tapa Sardar and Hadda, which we shall discuss later on.

In conclusion, Ai Khanum as an art centre appears to be closely linked to Hellenistic culture but not altogether excluding the Achaemenian tradition from its repertoire, chiefly in architecture; at the same time the excavations at Ai Khanum bear witness to the fact that Bactria was ready to accept the products of the Hellenized Near East and able to blend the various traditions into an original style, the Greek character of which was its distinguishing trait in relation to the other neighbouring cultures.

Bactrian art is indeed the outcrop of an élite culture; when the tradition of Greek art finds its way into the everyday figural language of larger groups of population, that will be the birth of Gandharan art.

It is also possible that this transformation of Graeco-Bactrian into Gandharan art cannot be fully understood in the light of the excavations at Ai Khanum alone, and that other sites in Afghanistan preserve towns still awaiting excavation that flourished from the Graeco-Bactrian period through the Indo-Scythian and Indo-Parthian, and well into the Kushan period.

Such seems to be the case at Emshi-tepe (only 4 km northeast of Shibarghan, north Afghanistan), a site already visited by Barger and Wright (1941: 54) where the Afghan-Soviet Mission recently brought to the light a town, round in plan, whose life probably began in the Graeco-Bactrian period and continued until the fourth to fifth century A.D. (Kruglikova and Sarianidi, 1971: 20–26; Kruglikova, 1973).

The French excavations at Balkh in 1924–25 were certainly disappointing; the trial-trenches of 1947 present us with firmer ground for the study of the pottery in this period (Gardin, 1957a; see also Young, 1955, on the Pennsylvania University work at Balkh in 1953). In this connection one must also mention the excavation of Begram, the ancient Kapisi of which more will be said in the next chapter, where the earliest period (Begram I) has been dated to the second century B.C./second century A.D. (Ghirshman, 1946). The pottery from this early period includes a greyware which, according to F.R. Allchin (personal communication), seems to have its clearest parallels from the lowest levels of Shaikhan Dheri, Charsada, mainly in the Greek and Scytho-Parthian levels (Dani, 1965–66: 136 ff.); and some large bowls of unpolished redware, with everted rims, that find parallels from Sirkap (Taxila) between 50 B.C. and A.D. 50, Tepe Zargaran (Balkh) immediately before and after the end of the Graeco-Bactrian kingdom, and Kobadian, in Soviet Tajikistan, between the third and first century B.C., thus providing links to other sites distributed over the whole area affected by the diffusion of Graeco-Bactrian influence (for these parallels, the pottery from Balkh, and a discussion of the aforementioned datings proposed for Begram, Sirkap and Kobadian, see Gardin, 1957a: 23, 88 and the bibliography quoted therein).

The excavations recently started by a British Mission at Shahr-i Kohna, Kandahar seem to have been successful from the outset; their publication has appeared in the journal of the Society for Afghan Studies (Whitehouse, 1978; McNicoll, 1978).

Most remarkable is the fact that the original city wall and rampart are possibly pre-Achaemenid (Fig. 4.34), as comparisons with pottery from Mundigak have shown, while no purely Achaemenid deposits have as yet been positively identified; nor has anything been identified which is definitely ascribable to an Alexandrine foundation. However, small



Fig. 4.34: Kandahar. Section through the town wall, showing major phases of construction.

rubble-built wall footings, the remains of what appears to be a working-class residential area of town, are datable on the ground of numismatic evidence ‘to the late Mauryan period and to the floruit of Indo-Greek power’, i.e. 250–150 B.C. (A. McNicoll: typewritten preliminary reports, 1975).

Other sites are promising but have either not been thoroughly investigated or only their existence has been recorded. Such is the case, for instance, of Shahr-i Banu, near Tashkhurgan, where in 1938–39 some French excavations showed the superposition of several towns, yielding Kushan coins from the upper layers and coins of Euthydemus and Heliocles from the lower (Carl, 1959a); and of a town in the Wardak district, between Kabul and Ghazni, where surface sherd collection points to the Kushan age but the plan suggests the existence of analogies with Ai Khanum (Fussman, 1974b).

Lastly we must mention the hypothesis, that Bactrian art was well accepted outside Bactria, at the Parthian court of Nisa, where the famous rhyta found by the Soviet archaeologists (Masson and Pugachenkova, 1956–59) may be regarded as the richest group of Bactrian art objects ever found, as has been cautiously suggested by Bernard (1971: 433; but also Barnett, 1968).

# The Pre-Muslim Period

*D. W. Mac Dowall and M. Taddei*

## Historical Background

### The Kushans

In the mid second century B.C. the Yueh-chi tribe had migrated westward from the borders of China into Central Asia, after being defeated by the Hiung-nu, a neighbouring tribe of Turki nomads of the same stock. In the first century B.C. the Yueh-chi had settled in Bactria and other mountain territories of the former Indo-Greek kings. At this stage they were separated into five principalities. Eventually about the beginning of the Christian era the principality of the Kushans attacked and destroyed the other four hsi-hou. The Chinese annals describe how the Kushan king invaded An-hsi (Parthia or Indo-Parthia) took control of Kao-fu (Kabul) and destroyed P'u-ta and Chi-pin (the Punjab and Kashmir).

The early Kushan king Kujula Kadphises is known from his coins to have ruled in several provinces, but seems to have lost control of most of the Indus valley to the Indo-Parthian empire of Gondophares and Abdagases in the first half of the first century A.D. The Nameless King, known only from his titles on coins and inscriptions as the King of Kings, the great, the saviour (*Soter Megas*), seems to have been the first Kushan ruler of the empire that stretched from Bactria across eastern Afghanistan and northern Pakistan to the upper Ganges in India. His successor Vima Kadphises consolidated the empire; and was in turn succeeded by the three great Kushan kings, Kanishka, Huvishka and Vasudeva, who between them ruled the Kushan empire for about a century. Although he was not the first Kushan king, Kanishka introduced a new era. Its reference date is disputed (see below p. 240) but Kanishka's accession should probably be placed early in the second century A.D. In a series of bold campaigns he succeeded in enlarging the Kushan empire; his successor Huvishka lost the most distant provinces of Chinese Turkestan and eastern India; but his successor Vasudeva still ruled a powerful kingdom which controlled major sections of important trade routes. When overland trade through Iran was interrupted by the Parthians, the Kushans were able to provide a safe route from Balkh through Kabul, Peshawar and the Indus valley to Broach on the Indian Ocean. From here sea traders would carry merchandise to Alexandria and the Roman Empire.

During this period there is striking evidence of strong Graeco-Roman influence in the development of Gandharan sculpture and Buddhist art and in the Kushan coinages. Under the



patronage of the Great Kushans, Buddhism spread first westwards into Afghanistan and then across Central Asia to China, leading to the establishment of monasteries at oases on the trade route.

## The Later Kushans and Kushano-Sasanians

The history of the later Kushan empire remains obscure. It came into conflict with the powerful Sasanian Empire of Iran, which was established early in the third century A.D. and which seems to have conquered some western Kushan provinces. There is late evidence in Tabari for an eastern campaign by the Sasanian king Ardeshir I (212–241); the trilingual inscription of the Sasanian emperor Shapur I at Naqsh-e Rostam dated to 262 lists part of the Kushan empire among the eastern Sasanian provinces; and Shapur II campaigned against the Cuseni (i.e. Kushans) in 356/7. There are consequently divergent views about the political status of the Kushan kings of the fourth century A.D.—particularly those who have Sasanian names or wear Sasanian type head-dresses. They may be Sasanian viceroys in the old Kushan empire, or simply viceroys of some of its western provinces lost to Sasanian control; or they may be independent Kushan sovereigns, ruling a much diminished territory, influenced by Sasanian art and culture and linked at times by marriage alliances with the Sasanians.

A king with Kushan royal titles is mentioned in the inscription of Samudragupta (c. 335–380) from Allahabad in India; and the Chinese annals indicate that during the period of the Wei dynasty (386–556) power in Kabul and Gandhara was exercised by a dynasty founded by Chi-to-lo, prince of the Great Yueh-chi, who built up the Kingdom of the little Yueh-chi with its capital at Peshawar.

## The Hephthalites

In the latter part of the fourth century A.D. a succession of Hunnic tribes invaded Bactria and established control over the country north of the Hindu Kush mountains. The first of the new invaders were the Alchono (probably red Huns) who seem to have been part of a larger grouping of Huns. After defeating the Sasanians and killing their Emperor Firuz in 484, the Hephthalites established a major empire which extended from central Asia to the Indus valley. The Chinese annals of the period assert that the Hephthalites belong to the Yueh-chi or Kushans, and it seems clear that they did mix well with the local Iranian population of Bactria from whom they adopted the use of Bactrian script. Their empire did not however last for very long. In India Yasovarman, King of Malwa, led a confederacy to defeat the Hunas in 528 and obliged them to withdraw to Kashmir; and in the mid sixth century the Oxus empire of the Hunas was overthrown by the Turkis allied to the Sasanians.

## The Progress of Islam

The Arab armies following the banner of Islam defeated the Sasanians in A.D. 642. During the latter half of the seventh century they first raided the western Afghan provinces of Seistan and

Herat and then controlled them with Islamic governors. When subsequently the power of the caliphate declined, local Islamic rulers came to power in the ninth century – the Saffarids in Seistan and the Samanids at first in Bokhara and later in Balkh. During these centuries the mountains of eastern Afghanistan formed, with northern Pakistan a powerful non-Islamic Kingdom of the Turki and Hindu Shahis.

## Turki and Hindu Shahis

At the time of the visit of the Chinese pilgrim Hiuen Tsang in 630, there were a series of states dependent on Kapisa (Begram). Laghman had become tributary and Gandhara had a commandant from Kapisa. By 710 the whole locality had become dependant on Zabul, but subsequently the Kabuli Shahis became the powerful rulers of east Afghanistan. The Turki dynasty numbered among its kings Vrahitigin, Tigin Shah, and Khinjl. The kings were Buddhists but the Hindu gods, especially Siva and Durga, were worshipped. Albiruni describes them as Turks who were said to be of Tibetan origin tracing their descent in 60 generations from Kanik (i.e. Kanishka) and so descendents of the old Turki or Kushan dynasty.

The Hindu Shahi dynasty was founded by Kallar the Brahman minister who overthrew the last Turki Shahi. Inevitably they came into conflict with the rising power of Islam. Yaqub captured Kabul in 870. The Shahis subsequently recovered the city, but transferred their capital at this period to Hund, a town on the Indus 25 km above Attock in modern Pakistan. The position of the Shahis worsened when a line of strong Islamic rulers became established in Ghazni, after Alptegin, a Turkish slave, became master of the fort there in 962. His general and successor Sebuktegin (977–997) annexed Kabul in 977 and repeatedly raided the territory of Jaypal the Shahi king. Finally in a pitched battle near Laghman in 990 Sebuktegin decisively defeated Jaypal and annexed the province of Jalalabad and the remaining Afghan territories of the Shahis.

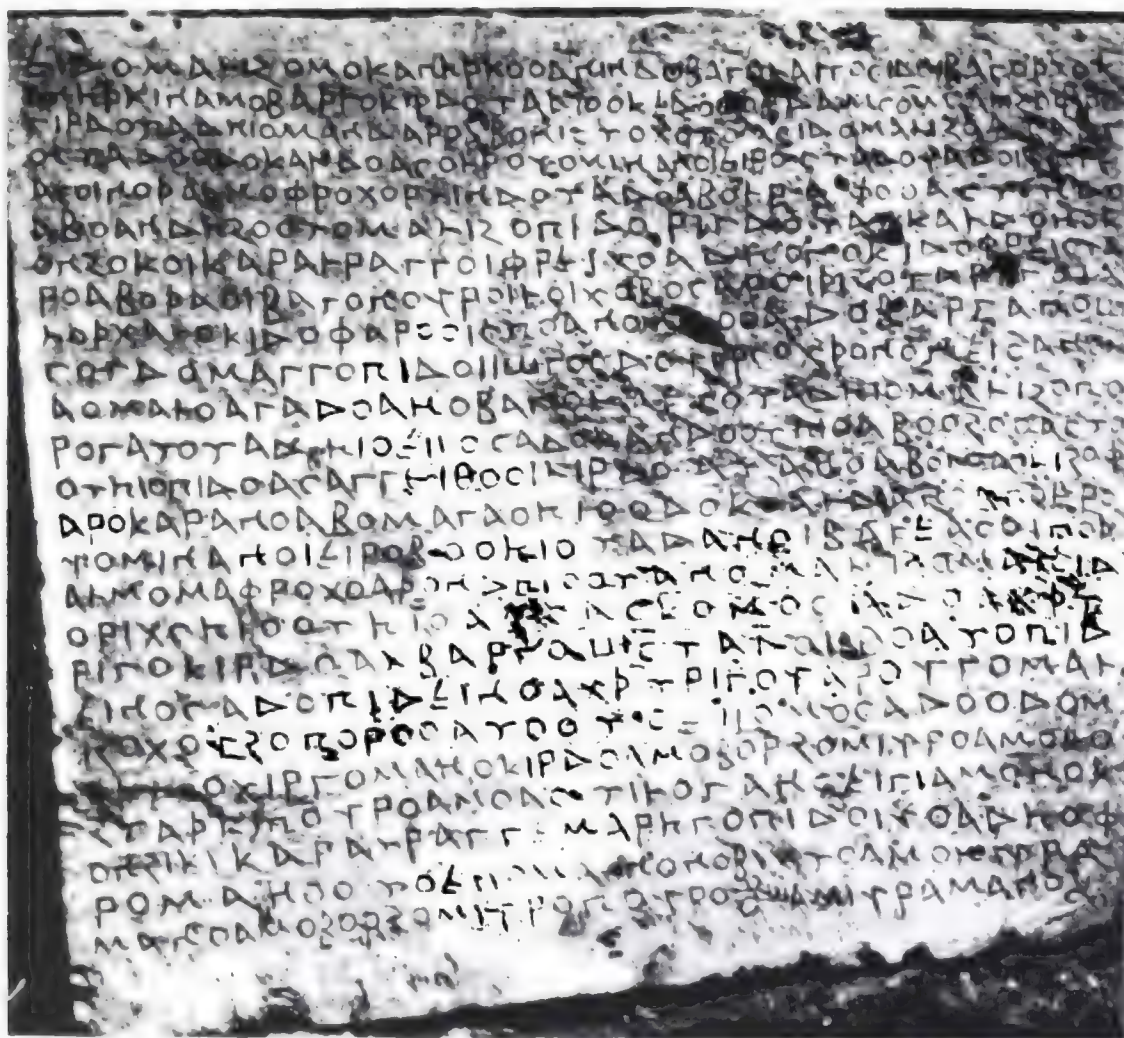
## Epigraphy

### The Surkh Kotal Inscriptions

The French excavations at Surkh Kotal near Pul-i-Khumri (Schlumberger, 1952a, 1954, 1955, 1964b) have revealed an important Kushan dynastic shrine situated on a steep hill and approached by a brick and cut-stone stairway 55 m high. The finds included several royal statues in stone, religious images in stucco and an important series of Bactrian inscriptions in clear Greek script but in an Iranian language that has been recognized as the middle Iranian language of Bactria, rather than the language of the Kushan invaders of Bactria.

#### *The Great Inscription*

In 1957 at the main entrance to the principal staircase, set into the enclosure wall, the excavators discovered the most important inscription at Surkh Kotal (Maricq, 1958:



**Fig. 5.1:** Surkh Kotal. The great inscription from the entrance to the principal staircase, in Greek script and the Iranian language of Bactria.

345–440; Benveniste, 1961: 114–117; Harmatta, 1964: 373–471) (Fig. 5.1). It is in excellent condition written in cursive Greek letters similar to those used on the coins of Kanishka. Unfortunately the words of the text are engraved continuously and there have been serious philological problems and disputes about its interpretation. It is now clear that the inscription, which visitors would have seen at the main entry to the staircase, describes the sanctuary as the Kanishka Oanindo (Nikator) sanctuary, to which the lord king gave Kanishka's name. Soon after its completion the sanctuary became waterless, and the building became desolate. Then Nokonzoko, the district superintendent in year 31 had the building surrounded with a wall, had a well dug and appointed an overseer. Subsequently two further versions of the main text were recovered from fifty-three blocks of stones found in the large well or built into the walls of the stairs leading to it.

Year 31 of the Kanishka era falls in the reign of Huvishka, the successor of Kanishka. While it is clear that the building inscription records the provision of the secure water supply which made it possible to use the building under Huvishka in year 31, it remains ambiguous whether the shrine was built by Kanishka to commemorate a victory soon after his accession

and was restored with a secure water supply thirty years later, or whether it was built about the time of Kanishka's death and the well and enclosure wall were simply added a few years later to provide the water supply necessary for its use.

### *The Monumental Wall Inscription*

(Curiel, 1954: 189–93; Maricq, 1958: 414–6; Benveniste, 1961: 141–50)

Carved on a series of blocks that seem originally to have been in a line along the second terrace as one climbs the great staircase, was a monumental wall inscription of which twelve fragments were recovered, some still *in situ*. It had large letters, between 5 and 7.5 cm high, indicating its importance. It seems to have been the foundation inscription of the sanctuary, whereas other inscriptions refer to later stages of construction. There are not enough word fragments to reconstruct it with any certainty, but it does contain a date including the Bactrian numeral for one, i.e. year 1, 11, 21, 31 or some larger number. It probably contained a traditional formula corresponding to the framework of the Great Inscription (Harmatta, 1965: 195–205).

### *The Palamedes Inscription*

(Curiel, 1954: 194–7; Maricq, 1958: 430–1; Benveniste, 1961: 150–2; Harmatta, 1965: 149–164)

A further fragmentary inscription contains two clear words that leave us in little doubt about its contents. Henning (1966: 336–7) recognized one as the Sogdian ByS'n'k—temple, altar, sanctuary that still survives as the modern place name Baghlan for this locality. The second is the Greek name Palamedes in the genitive. It presumably referred to the construction of the sanctuary “through Palamedes” the Greek who was either its architect, agent or clerk of works.

### *The Unfinished Inscription*

(Curiel, 1954: 193–4; Maricq, 1958: 345–440)

Equally puzzling is the other inscription which has a date—the stone slab on which the cutter has sketched in the first line of an inscription but only engraved fully in its final form the first six letters . . . “in the year 2 . . .” Different readings have been given for the last two digits of the number because they are simply sketched in roughly on the stone. Reading the third digit as *eta* Maricq gave 285. Harmatta (1965: 164–195) reading them as *koppa* and *theta* gives 299. If as seems more likely they are *omicron* and *theta* the date is year 279. Bivar (1963: 498–502) has argued that an earlier era, the Old Saka era, is used because when the unfinished inscription was cut in 279 the new era of Kanishka had not yet been introduced, i.e. year 279 must come immediately before year 1 of Kanishka. Fussman (1974a: 39–40) rightly points out that the inscription had been abandoned after very little work, was reused



when the level of the cella was raised and had no integral part in the later building. Harmatta (1965: 164–195) has tried to reconstruct the scratched-in text and reads a series of Kushan royal titles. The interpretation of these must however now be reviewed in the light of the newly discovered inscription from Dasht-i-Nawar with the same date of 279.

## The Inscription at Dasht-i-Nawar

### *The Greek and Kharoshthi Inscriptions*

In 1967 a French geologist first drew attention to a series of five inscriptions cut on a rock of volcanic origin at an altitude of 4320 m on the west side of the Dasht-i-Nawar about 49 km west of Ghazni (Fussman, 1974a: 8–22). One of the larger inscriptions (Fig. 5.2) uses the monumental Greek script of the early Kushan period that we know from the monumental wall inscription at Surkh Kotal and is in the Bactrian language. It has a date in the month of Gorpiaios of year 279 and includes the name of a King Ooemo. To the right is a Middle Indian inscription in Kharoshthi script which also begins with a date 279 in the month of Gorpiaios followed by the king's name Rajatirajasa . . . Vhamakusasa . . . There were clearly two versions of the same text—one in Bactrian the other in Middle Indian—mentioning the name and titles of the great Kushan king Vima Kadphises.

### *The Inscription in an Unknown Language*

The third inscription, the best preserved of the series, is written in a script derived from Kharoshthi, similar to the Kharoshthi of the Kushan coins, but it is in an unknown local Iranian language and remains undeciphered (Fussman, 1974a: 22–31). The script reads from right to left, and has diacritical marks similar to those on a painted graffito fragment discovered at Surkh Kotal (Mariq, 1958: 417) and a potsherd from Khalchayan (Pugachenkova, 1966: 59). The series at Dasht-i-Nawar is completed by two further inscriptions in poor condition—one in Greek and one in Kharoshthi script. The location of these five inscriptions is particularly remote and must have been equally so in antiquity. Like the introduction of a royal gold coinage, the use of rock cut trilingual inscriptions in an inaccessible place seems to be part of the deliberate Iranism of the early Kushans who seem to have consciously adopted practices associated with the Achaemenid great king whose successor they claimed to be.

### *Chronological Significance*

The special interest of the Dasht-i-Nawar inscriptions lies in their chronology. We now have dates for the Kushan king Vima Kadphises in two numerical sequences—the higher one 279 used here and in the unfinished Bactrian inscription at Surkh Kotal—the lower one of 184 or 187 found in the Kharoshthi inscription of Vima at Khalatse, a village in Ladakh 80 km below



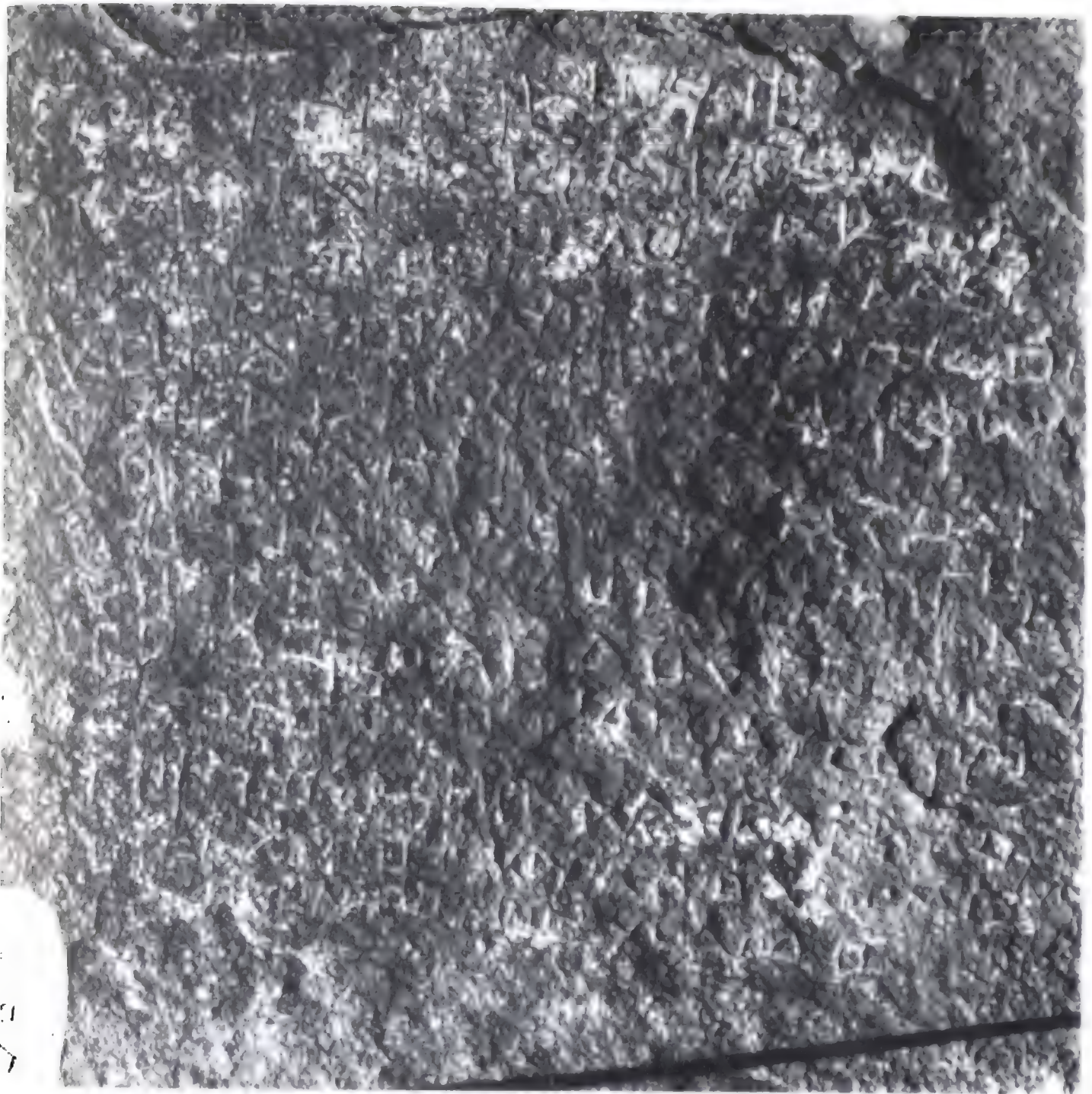


Fig. 5.2: Dasht-i-Nawar. The Bactrian inscription.

leh (Konow, 1929: 79–81). This reflects the pattern of two date sequences that we find in the Kharoshthi inscriptions of northern Pakistan after the time of Azes II. In the higher series Jihonika the satrap, whose coin types copy Azes II and are copied in turn by Kujula Kadphises, has a date of year 191 on the Taxila silver duck vase (Konow, 1929: 81–83; MacDowall, 1973: 215–230) a date that gives 90 years for the rule of Kujula Kadphises, Gondophares, Abdagases and the Nameless King Soter Megas before year 279 in the reign of Vima. In the lower series Gondophares, whose predecessors Indra-varma and Aspavarma copy the coin types of Azes II, has a dating of 103 at Takht-i-Bahi (Konow, 1929: 57–62) and the Nameless King Soter Megas has dates of 122 on the Panjtar stone, 134 on the Kalawan copper plate and 136 on the Taxila

silver scroll to give some 80 years in all before the Vima dating of 186 from Khalatse (MacDowall, 1968c: 1–21). Vima's absolute date turns on the eras to which these sequences are attributed. Fussman links 279 to the Graeco-Bactrian era of independence from the Seleucids in 247 B.C. to give a date of A.D. 32 for Vima. Bivar explains 279 by the Indo-Greek era of Menander when the Bactrian Greeks conquered the Indus provinces and the 184 or 187 of Khalatse to the Vikrama or Azes era of 58 B.C.—to give a date of A.D. 124 for Vima. Their interpretations are understandably influenced by their differing views on the era of Kanishka, who was Vima's direct successor.

## Other Kharoshthi Inscriptions

### *The Era of Kanishka*

From the various provinces of the Kushan empire come an important series of inscriptions dated in the era of Kanishka. Those in Brahmi from Mathura and the upper Ganges valley are dated between years 2 and 98, and there is a second series with later dates from 1 to 57. Among the Bactrian inscriptions from Surkh Kotal, the Great Inscription, discussed above, has a date of 31 in the era of Kanishka. Most of the Kharoshthi inscriptions associated with this era come from the Indus valley—in particular the northern provinces of Pakistan and the western province of Afghanistan. Recorded dates range from year 2 to year 89 and this gives a firm relative chronology. Unfortunately there is a continuing dispute about the initial year to which Kanishka's era should be referred (Basham, 1965; Gafurov, 1974). Many Indian scholars continue to assert that it is identical with the Saka era of the western satraps in A.D. 78. Most western scholars now support a date in the early second century A.D. between A.D. 120 and 144 while Göbl (1964: 137–151) argues for A.D. 230 and Zeymal (1974: 292–301) for A.D. 278.

### *Afghan Inscriptions Connected with the Kanishka Era*

The Afghan Kharoshthi inscriptions dated in Kanishka's era are associated with Buddhist stupa deposits. Among the antiquities sent from Kabul to the East India Company by Charles Masson was a brass casket which had an inscription on its lid—"in year 18 . . . the Gotama's relic was enshrined." (Konow, 1929: 151–152). From a stupa at Hadda, 8 km from Jalalabad, Masson recovered a jar which contained a Kharoshthi inscription "written with a pen but very carelessly". It was published by Thomas from a copy he found among Masson's papers at the India Office in London (Konow, 1929: 157–158). He read "in year 28 . . . a relic was deposited in the king's grove in a stupa by the architect Samghamitra." From a stupa near Wardak, 50 km west of Kabul, Masson recovered a bronze vase some 25 cm high and 14 cm broad, now in the British Museum, London (Konow, 1929: 165–170). The vase has a long inscription in four lines round its shoulder and circumference. It is dated in year 51 and records the establishment of the relic by Vagramarega in a stupa for the Maharaja Huvishka, and for the honour of the dedicator's relatives, friends and associates.



## *Undated Kharoshthi Inscriptions*

From Lalpura near Jalalabad comes a small stone relief of two wrestlers now in the Peshawar Museum (Shakur, 1946: 27–29). It has a short Kharoshthi legend in later Kushan script: *Minandrasa*, the Greek name Menander. Also of Kushan date in the second or third century A.D. because of its letter forms and the pot on which it was written, is the Kharoshthi inscription of Sihusada from Hadda, now in the Kabul Museum (Fussman, 1969: 5–9). The inscription is written in ink on the shoulder of a vase which was found in a larger jar with earth and bones. It seems to have been a funerary jar and inscription. Three of the small terracotta implements used by potters to thin the walls of their vessels that were discovered in the Begram excavations have Kharoshthi inscriptions of the Kushan period—a name in the genitive indicating their owner (Fussman, 1970: 43–55). One of them refers to a Buddhist—“he who is protected by the Samgha.”

Numerous sherds with inscriptions in Kharoshthi and Brahmi have been discovered at Hadda in the excavations of Dr Mustamandi and Dr Tarzi. The French excavations at the Buddhist monastery of Guldara 15 km southeast of Kabul between 1963 and 1965 produced nine fragmentary Kharoshthi inscriptions, two fragmentary inscriptions in cursive Bactrian and one that may be in Kamboji, found on sherds from vases that had once belonged to the Buddhist monastery in Kushan times (Fussman and Le Berre, 1976: 92–94). Other fragmentary Kharoshthi inscriptions on sherds have been discovered at Basawal (Mizuno, 1971: 41) and in southern Bactria. These sherd inscriptions in ink on vases that belonged to monastic communities are known from a series of Buddhist sites such as Takht-i-Bahi, Palatu Dheri and Shahr-i-Bahlol in Pakistan, and Kara Tepe by Old Termez in USSR on the Oxus frontier.

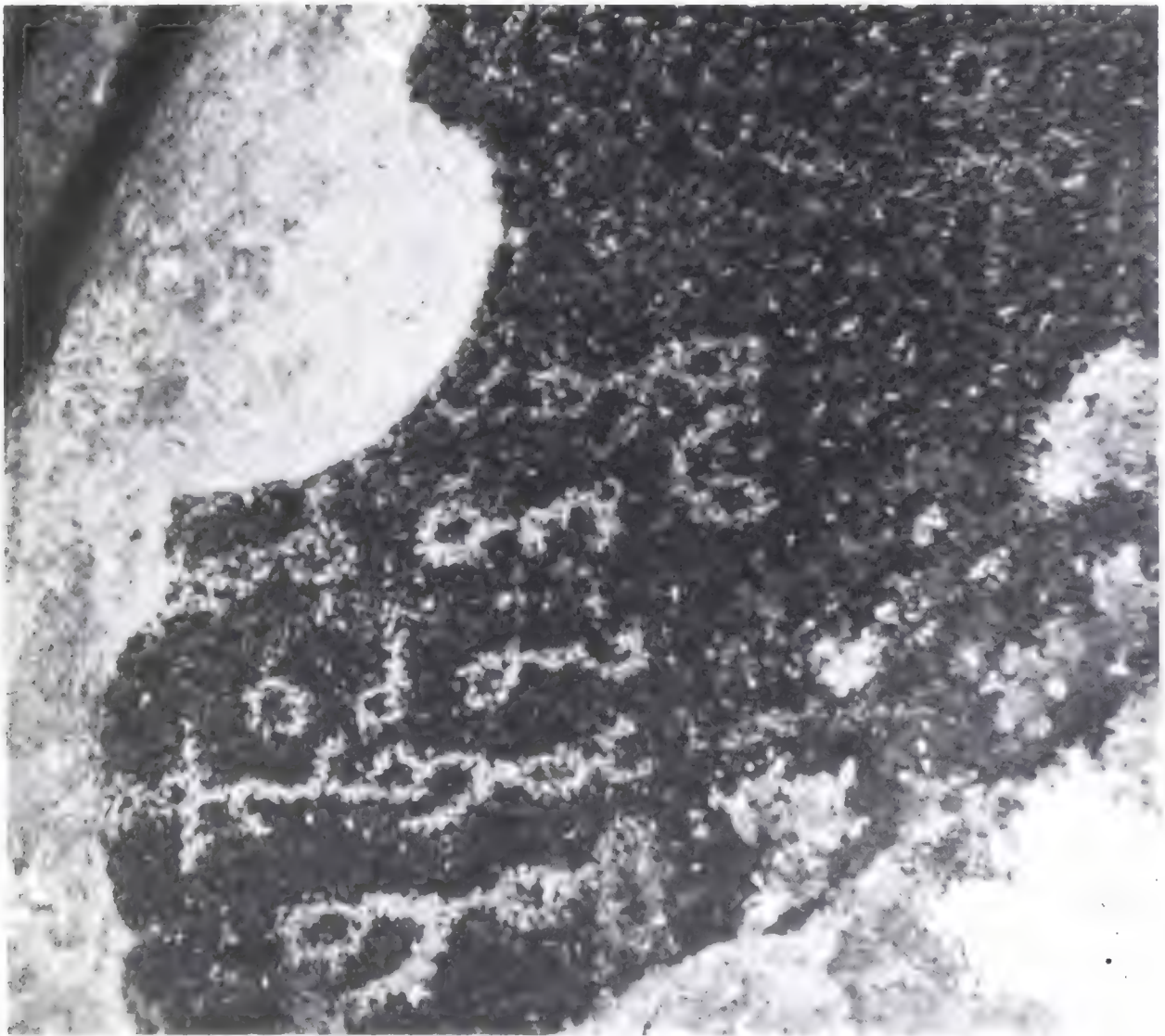
## Later Inscriptions

### *The Use of Bactrian*

Bactrian remained in use for a very long time in Afghanistan and northern Pakistan. Under Kanishka the Kushan coinage substituted Bactrian for Greek legends and discontinued the use of Kharoshthi at its mints. In royal titlature Basileus Basileon was replaced by Shaonano Shao (Göbl, 1960a: 94–96) and the names of divinities such as Helios and Selene became Mioro and Mao. Under the Great Kushans the script remains largely the monumental script of the Surkh Kotal inscriptions: but with the Kushano-Sasanians, Bactrian cursive was employed on the coins (Bivar, 1956: 13–42). Its use was continued under successive rulers of the Hunnish and Turkish periods (Humbach, 1966: 50–69). The earliest Shahi coins in the first issue of Spalapati Deva still have a cursive Bactrian legend on the reverse transliterating the Sharada legend of the obverse, but the use of Bactrian is abandoned in favour of Sharada in the later issues. Most of the inscriptions of the Shahi period come from Pakistan and are in Indian scripts, but the late use of Bactrian is attested in the inscriptions from the Tochi valley in northwest Pakistan (Humbach, 1966: 105–117). Two of these have dates in years 632 and 635 of a Bactrian era, and can be dated by the accompanying Sanskrit and Arabic legends to the mid-ninth century A.D.—the latest attested use of Bactrian.



**Fig. 5.3:** Jagatu, Ghazni province. The “Triratna” Bactrian inscription.



**Fig. 5.4:** Jagatu, Ghazni province. The Bactrian inscription.



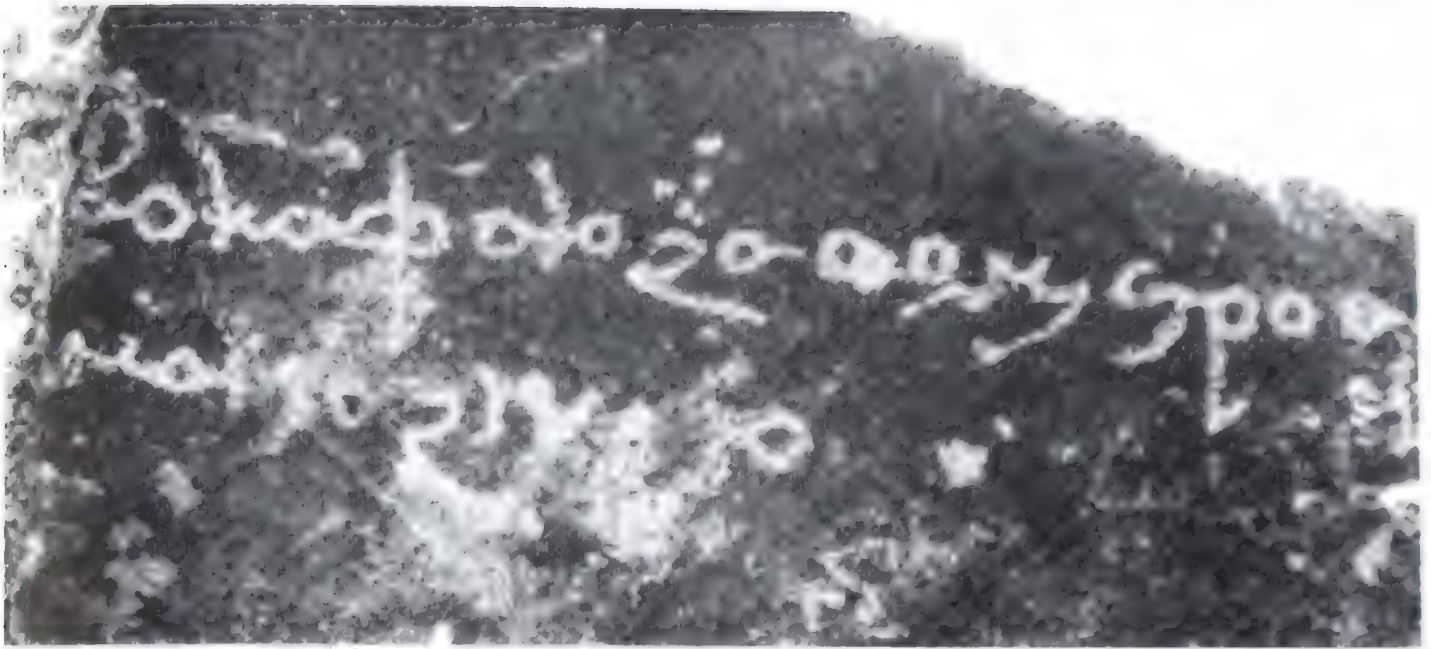


Fig. 5.5: Uruzgan. The first Bactrian inscription.

### *The Jagatu Inscriptions*

Two later Bactrian inscriptions have been discovered at Jagatu, 20 km from Ghazni on the arid plateau crossed by an ancient caravan track from Ghazni towards Kabul (Scerrato, 1967: 11–24; Humbach, 1967: 25–26). The first inscription (Fig. 5.3) is carved on the flat surface of a granite boulder by scratching on the thin dark surface of the stone leaving the inscription standing out. It contains the Buddhist *triratna* formula i.e. reverence to the Buddha, to the Dharma and to the Sangha. The second inscription (Fig. 5.4) is on a large rock at the side of the caravan track, and used the same technique. But it is poorly preserved and difficult to interpret. Humbach suggests it contains a reference to Tigin Shah and uses *uluy*, a word



Fig. 5.6: Uruzgan. The second Bactrian inscription.



borrowed from Turki. Both inscriptions probably belong to the seventh or eighth centuries A.D. in the Turkish period.

### *The Inscription of Uruzgan*

There are two other Bactrian inscriptions of this period at Uruzgan (Figs 5.5 and 5.6) some 280 km north-west of Kandahar on an ancient caravan route to the north. The inscriptions are carved on a boulder by scratching with a pointed punch, as at Jagatu (Bivar, 1954: 112–118). The second inscription (Fig. 5.6) also rock-cut, two miles to the north of the first, is more or less the same but has a division of words not found in the first. Bivar interprets both inscriptions as “the divine and glorious King of Zabul Mihira” and connects them with the Hephthalite dynasty of Toramana and Mihirakula in the sixth century A.D. Humbach (1966: 103–104) offers a different transliteration and sees in both inscriptions a reference to the Tegin and his sun and moon radiance. The letter forms seem to be somewhat later than those of the Jagatu inscriptions and this makes a date during the seventh or eighth century A.D. in the Turkish period likely for the Uruzgan inscriptions also.

### *Indian Inscriptions in Sharada Script*

The use of Brahmi during the Hephthalite period is well attested in Gandhara both from coins and from inscriptions such as the Wartir image (Shakur, 1946: 45) and the Wano stone inscriptions (Shakur, 1946: 42) both from the north of modern Pakistan. The subsequent development of Brahmi into early Sharada script is seen in two inscriptions from Afghanistan. The inscription from Gardez, now in Kabul, is engraved in two lines on the base of a marble image of the Hindu god Ganesa (Tucci, 1958: 327; Sircar, 1963: 44–46; Dhavalikar, 1971: 332). It refers to a Maharajadhiraja Sahi Khingala and dates to his sixth year. From its early letter forms Tucci suggested a date in the sixth or early seventh century A.D. The second is the inscription of the pedestal of the Uma Mahesvara image discovered in the Japanese excavations at Tapa Skandar (Kuwayama, 1972a: 8–12; Yamada, 1970: 15–22). The statue portrays Mahesvara, his consort Uma and the child Skanda. The inscription refers to the Hindu Triad, Brahman the creator, Siva the destroyer and Visnu the preserver. Yamada, by analysing the differences between the letter forms here and in scripts in ordinary acute angled Brahmi from India, has shown that both the Skandar and Ganesa inscriptions represent transition scripts—probably in the eighth century A.D.

The decline in the use of Bactrian script in the Shahi period seems to be related to the growing loss of territory in Bactria and Western Afghanistan to the advance of Islam, which brought with it the use of Arabic. The corresponding growth in the use of Indian script in eastern Afghanistan—Proto-Sharada being derived from Brahmi and Gupta script—was the natural consequence. The Shahis looked increasingly to Gandhara, Kashmir and the Punjab.

The clear evidence of the important role of this script in Afghanistan during the eighth and ninth centuries comes from the long series of Shahi coins from the later eighth century A.D., in which both obverse legends and mint control marks use Sharada, while the Bactrian legend that had been found on the first issue of Spalapati is completely ousted from the coinage

(MacDowall, 1968: 189–224), Foucher (1947: 386–387) noted nine Sharada inscriptions on the river Alishing 25 km from Tagarhi, and the Bourgeois (1971: 54) have reported four more between Qaqrgha'i and the town of Laghman on the granite rocks at the side of the valley. A defaced rock inscription of Shahi date from Jalalabad now in the Lahore Museum (Vogel, 1911: 259) adds little to the Afghan material; and the other published inscriptions of the Shahi period come from Pakistan.

## Numismatics

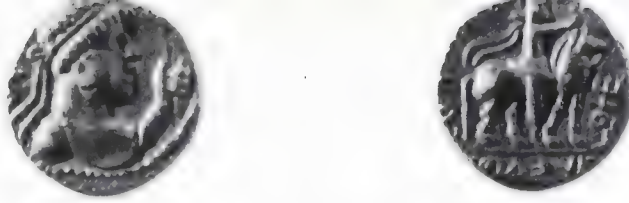
### The Kushan Coinages

#### *The Kushan Monetary System*

The early Kushan king Kujula Kadphises simply copied the denominations and types of the billon and copper currency circulating in each of the localities he brought under his control. The Nameless King, Soter Megas (Fig. 5.7) was the first Kushan to establish a standard currency from the Oxus to the Ganges. His coins have an idealized rayed head representing the divinity Mithra and the reverse type of the king on horseback. They are particularly common in Afghanistan, and Masson acquired 695 examples from Begram in three years. This standard coinage was intended to replace the multiplicity of local coinages that the Kushans had inherited. To avoid confusion about the relative purity of silver and the serious problem of local imitations, the new currency was based on its intrinsic copper value. It was struck in two sizes at 8.5 g and 2.1 g (MacDowall, 1960: 63–74). Vima Kadphises increased the range of denominations with a new heavy copper coin of 17 g, and a gold dinar.

Kanishka in his first issue struck coins with Greek legends, but later changed from Greek to Bactrian, both for his royal titlature and the names of the divinities he used as reverse types (Fig. 5.8). The gold has a wide range of Greek, Iranian and Indian divinities; on the coppers (Fig. 5.9) there are six substantial types of *Mioro* the sun, *Mao* the moon, *Athsho* the fire god, *Oado* the wind god, *Siva* and *Nana*. At this period there was probably a mint in Afghanistan at Begram, close to the rich copper deposits of the Ghorband valley.

Huvishka retained the weight and purity of Kanishka's gold dinar unchanged (Fig. 5.10). His earlier copper coins followed Kanishka's weight system but had three obverse types—that of the king riding an elephant, the king seated cross legged and the king reclining on a couch. In Masson's finds from Begram the couch lounge type is commonest and probably was the type of the Afghan mint at Begram—but the other two types are also regularly found. In Huvishka's later issues there was a sharp reduction in the weight standard of the main copper denomination from c. 16 to c. 13 g—making the copper a token coinage (Fig. 5.11), dependent for its value on the backing of the gold. The experiment was not a success. There was an extensive series of local unofficial imitations, and Huvishka's successors eventually reverted to the earlier pattern of a full value copper denomination. Huvishka's official mints had not struck subdivisions of the standard copper denomination. Local copies, often very



**Fig. 5.7:** Copper didrachm of Nameless King "Soter Megas", with the rayed head of Mithra and the reverse type of the king mounted on horseback (late first century A.D.) Private collection. (All coins in this chapter are reproduced actual size.)



**Fig. 5.8:** Kushan gold dinar of Kanishka with the king standing at an altar and the reverse type of Nana (second century A.D.). Kabul Museum.



**Fig. 5.9:** Kushan copper tetradrachm of Kanishka, with the reverse type of Mithra radiate. Kabul Museum.



**Fig. 5.10:** Kushan gold dinar of Huvishka (late second century A.D.) with the reverse type of Nana. Kabul Museum.



**Fig. 5.11:** Kushan copper tetradrachm of the reduced standard of Huvishka, showing the king riding on an elephant, and a figure of Siva. Kabul Museum.

crude in style, supplied this need, and are well represented in the local museum collection at Kandahar and among Afghan finds in the Kabul Museum.

### *Foreign Influence*

In these monetary reforms and experiments we see foreign practices adapted to local Kushan needs. The Nameless King's standard coinage in copper followed the Chinese principle of a base metal standard; and it certainly succeeded in creating a currency that was not liable to fraud through debased imitations. Vima's introduction of the gold dinar was probably inspired both by the Achaemenid precedent and the current Roman aureus. The use of reverse types derived from Graeco-Roman pattern books (Göbl, 1960b: 75-95), the adoption of an *officina* system with distinctive reverse types to mark the product of each *officina*, (MacDowall, 1975: 144-148), and the attempt to make the copper coinage token on the Roman pattern reflects standard Graeco-Roman mint practice of the early empire.

### *Coins in Buddhist Stupa Deposits*

A large number of Buddhist stupas in Afghanistan were examined by Masson and Honigberger in the early nineteenth century (Wilson, 1841: 55-118). They often found among the treasures deposited in the relic chamber coins of the period in which the relics were deposited and the stupa was built. At the Bimaran stupa, from which the Bimaran reliquary was recovered, there were four billon coins with the tamgha of Kujula. In Tope 3 at Bimaran there were 27 coins of the Nameless King. In Tope 4 at Chahar Bagh there were 28 copper coins of Kanishka. Particular interest attaches to the stupa deposits that also contained Roman coins. From the Ahin Posh Tope near Jalalabad, three Roman aurei of Domitian, Trajan and Sabina, the wife of Hadrian (A.D. 119-138) were found with ten gold dinars of Vima, six of Kanishka and one of Huvishka (Simpson, 1879: 77-79; Hoernle, 1879: 122-138; Cunningham, 1879: 205-212); and gold coins of Vima and Kanishka were found with an aureus of Trajan (A.D. 98-119) at Shevaki near Kabul. These associated Kushan and Roman finds provide important *prima facie* evidence for the context and date of Kanishka (MacDowall, 1968b: 134-149).

### *Other Hoards and Site Finds*

Because there was no Kushan silver currency, most substantial payments had to be made in copper coinage and this explains the commonness of Kushan copper coins in Afghanistan. Excavations at sites of Kushan date such as Begram, Surkh Kotal and Balkh, have provided substantial numbers. Particularly important for the interpretation of the later coinage are the hoards of late Kushan copper coins in the Kabul Museum.

### *The Later Kushan Coinages*

In the later issues of the gold coins bearing the titles of Vasudeva, we see the emergence of two sequences (Rosenfield, 1967: 106-120). The northern series, which retains the Siva and

the bull reverse, evolves into the distinctive scyphate or saucer-shaped gold dinars on which eventually we find cursive Bactrian inscriptions and kings like Hormizd and Vahran with a Sasanian headdress. The southern series introduces Brahmi letters in the field, eventually changes to the reverse type of an enthroned goddess Ardochsho and is copied by the local chiefs of the Punjab and the Guptas.

Parallel to the gold issues there is an extensive coinage of the later Kushans in copper. These are often crudely struck with part of the type off flan and rarely have any legible legend. The earlier coppers of Vasudeva have a broad flan and fabric similar to the coins of Huvishka (Fig 5.12). Among the later issues we can distinguish three major series:

1. dumpy Siva and the bull coppers, sometimes with a Nandipada symbol, struck to a weight standard of 7–9 g (Fig. 5.13);
2. dumpy Ardochsho coppers with an increasingly arched termination of the King's dress—from 5–8 g (Fig. 5.14);
3. crude Siva and the bull coppers with very crude form for the king—from 3–6 g (Fig. 5.15).

Some of the later series are cast local copies and moulds for their manufacture have been found in Pakistan.

Although some Ardochsho coppers have traces of a Brahmi letter in the field and were probably issued in the mint responsible for the Ardochsho gold, all the three later Kushan copper series are represented in quantity at late Kushan sites across Afghanistan from the Oxus to the Indus. They seem to represent three successive stages of the standard denomination of the late Kushan empire, after its currency reverted to a full value copper coinage. They are represented in a series of overlapping hoards in the Kabul Museum which contain coins of successive issues and reinforce the evidence of metrology, type development and stratigraphy for the sequence. Particularly interesting are the coins in the 1946 hoard from the Begram excavations which contain coins of the earlier Siva type deliberately cut at the edge to reduce the amount of copper to assimilate the coins to the lower weight of the next group.

## Sasanian Influences

### *The Kushano-Sasanian Coinages*

Whatever may have been the political status of the later Kushan empire, there was certainly a sharp growth in Sasanian influence which is seen most clearly in the so-called Kushano-Sasanian coinage (Bivar, 1956: 13–42) (Fig. 5.16). The Kushano-Sasanian gold scyphates have been found on the Oxus, at Qunduz, in Badakshan and in hoards from Charikar and Kabul (Curiel, 1953: 126–127). Kushano-Sasanian copper coins have a more localized distribution. The small series with neat Bactrian legends are well represented from the Balkh excavations (Fig. 5.17) and in the Mazar museum—and may have been intended to provide fractional denominations for the later Kushan copper currency. The larger series with a dumpy fire altar begins in the Indus Valley with an issue of Shapur II c. A.D. 365. Coins derived from this





**Fig. 5.12:** Broad flan copper coin of Kushan King Vasudeva (third century A.D.) with the king standing at an altar and the reverse type of Siva and his bull. Bought in Kabul. Pte. Collection.



**Fig. 5.13:** Copper Kushan coin with same types but dummier fabric. Pte. Collection.



**Fig. 5.14:** Later Kushan copper coin with the reverse type of Ardochsho enthroned. Pte. Collection.



**Fig. 5.15:** Later Kushan copper coin with a crude figure of Siva and his bull. Pte. Collection.



**Fig. 5.16:** Kushano-Sasanian gold scyphate coin with the reverse type of Siva. Herat Museum.



**Fig. 5.17:** Copper Kushano-Sasanian coin with king standing at altar and reverse type of Siva and his bull. Pte. Collection.



**Fig. 5.18:** Kushano-Sasanian copper coin with a dumpy fire altar derived from the issues of Shapur II. Pte. Collection.



**Fig. 5.19:** Sasanian silver drachm with the usual reverse type of fire altar and two attendants—but with two obverse countermarks. Bought in Kabul Bazaar.

coinage provided the later copper currency at Begram and Hadda and constitute a further stage in the development of the standard denomination (Fig. 5.18).

### *The Tepe Maranjan Hoard and Other Sasanian Finds*

The hoard from Tepe Maranjan near Kabul (Curiel, 1953: 101–131) containing 368 Sasanian silver drachms—326 of Shapur II, 28 of Ardeshir II and 14 of Shapur III (A.D. 383–388) with 12 gold Kushano–Sasanian scyphates, provides important evidence for the previous metal currency of eastern Afghanistan, the dating of the Kushano–Sasanian gold coinage and the chronology of Kidara who became king of the southern Kushan provinces.

Sasanian silver coins from Shapur II onwards are commonly found in Afghanistan. They were reported from Seistan (Rapson, 1904a: 673–680; Codrington, 1911: 779–784). Hackin (1935: 287–292) notes that they are common at Herat, Maimana and Shahr-i-Banu near Tash Kurgan; and they are frequently found in the neighbourhood of Kabul. Masson encountered them at Begram and they were well represented among the silver coins found in stupas near Hadda. In the absence of an indigenous silver coinage Sasanian silver obviously filled the gap, even in territories beyond the Sasanian empire.

### *Coinage of the Hephthalites*

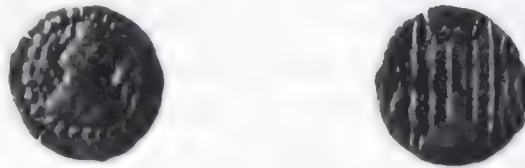
The earliest coins of the new Hephthalite kingdom in Bactria consisted of silver drachms of Sasanian type with the usual obverse of Shapur II (309–379) but struck from dies which had been meant to replace Shapur's name with the Hephthalite title *Alchono* (Göbl, 1967, I: 54). In the following century we see the development of the Hephthalite currency of silver drachms based on the Sasanian denomination retaining a fire altar on the reverse but with a distinctive Central Asian bust, the Hephthalite tamgha and Bactrian legends. (Göbl, 1967, I: 44–91). Other coins with the same types have Brahmi legends, but these seem to have been struck for circulation in the Indus valley and Kashmir. The Hephthalite coins of this period from Tpe 10 at Hadda, found with five Roman gold solidi of Theodosius, Marcian and Leo (A.D. 457–474) seem to have been mostly Hephthalite coins with Bactrian legends. Several of the later silver drachms of Sasanian kings found in Afghanistan, have Hephthalite countermarks and seem to have been coins paid in tribute by the Sasanians after their defeats under Firuz, countermarked to serve as Hephthalite currency (Fig. 5.19).

### *The Coins of Napki Malka*

In the succeeding years silver drachms (Fig. 5.20) with the legend *Napki Malik*, and the copper denominations that accompanied them provided the currency of Kabul, the Kohdaman and Kohistan districts (Hackin, 1935: 287–292) (Fig. 5.21). The copper coins are common at Begram; and a noteworthy hoard of silver coins of this type was discovered at Gardez in 1957 (Scerrato, 1967: 23). The variety of styles and scripts used in this coinage suggests that there may have been a number of issues by different kings over a broad spread of time; but there is



**Fig. 5.20:** Silver drachm of Napki Malik type with the Sasanian reverse type of fire altar and two attendants. Pte. Collection.



**Fig. 5.21:** Copper coin of Napki Malik with the same obverse and reverse types. Pte. Collection.



**Fig. 5.22:** Base silver Gadhaiya paisa from the 1973 Kandahar hoard with a crude head on the obverse, and a stylized fire altar on the reverse ultimately derived from the standard types of the Sasanian drachm. Pte. Collection.



**Fig. 5.23:** Shahi silver coin of Samanta Deva from the 1970 Shewaki hoard with the types of a recumbent bull and a horseman. Pte. Collection.

serious disagreement about their attribution. Earlier scholars associated them with the Hephthalites, but there is much to commend the view that they are coins in the Hephthalite tradition but of the Turki period of the later sixth and early seventh centuries A.D.

### *The Issues of Vrahitigin*

Demonstrably later, because they are sometimes overstruck on the drachms of Napki Malka, are the silver drachms of Vrahitigin. (Göbl, 1967, I: 142–145). They have a bust three-quarters frontal of the king with legends in both Bactrian and Proto-sharada, and the facing head of a divinity crowned by flames with a Pahlavi legend on the reverse. The king's crown has a wolf's head design—the wolf being the legendary ancestor of the Turki race. The deity is copied from the type on coins of Khusru II (A.D. 591–628). Vrahitigin's coins have been found in the Indus valley and from the stupa at Manikyala in northern Pakistan; Lord acquired 40 specimens from north of the Hindu Kush mountains and Cunningham received about 30 from Kabul. These rare coins seem to be issues of the Turki Shahis of the later seventh century A.D.

From this period is the small group of coins, buried in a cinerary urn below the princely couple in Niche E at Fondukistan. It includes countermarked coins of Sri Sahi and two silver drachms of Khusru II. One of these was struck in year 37, i.e. A.D. 657 but the two countermarks can be dated to A.D. 682 and 689 (Göbl, 1967: II, 313–314).

### *Gadhaiya Paisa*

The base silver Gadhaiya currency of Rajputana and Gujarat (from the eighth century A.D.) (Smith, 1906: 240) derived ultimately from a Sasanian prototype, is sometimes found in Afghan collections, and a hoard discovered near Kandahar was offered for sale in the bazaar at Kabul during 1973 (Fig. 5.22).

## Problem of the Shahi Coinage

### *The Pattern of the Coinage*

Between A.D. 750 and 1000 the currency of eastern Afghanistan and Gandhara was provided by the extended issues of the silver coinage of the Shahis—at first the kings of Kabul and subsequently the rulers of Ohind (Smith, 1906: 243–9; MacDowall, 1968: 189–224). Throughout the whole of this period the Shahis used standard obverse type of a recumbent Indian humped bull with the reverse type of a horseman. Most of the coins have an obverse legend in Sharada script—either *Sri Spalapati Deva* or *Sri Samanta Deva*, but these are titles not personal names, Spalapati being a Sanskritized version of a Persian title for commander in chief and Samanta having some significance in Sanskrit. Bull and horseman coins of this series in both silver and billon are all of approximately the same weight and were clearly intended to pass as the same denomination. We can however distinguish the successive issues of the



coinage by the letters and other symbols serving as privy marks in the reverse field and can put them into their chronological sequence by a study of the developing changes in the type and from the small but progressive reduction in the real silver content of the denomination and the weight standard to which successive issues were struck.

### *Silver Coins of Spalapati Deva*

The earliest group of the Shahi silver coins is distinguished by its obverse legend—the titles *Sri Spalapati Deva*. Coins with this legend are struck between 3.1 and 3.5 g with a remarkably uniform content of 70% silver. In the first issue of this group the reverse legend repeats in cursive Bactrian script the Sharada of the obverse. This is copied but progressively misunderstood in subsequent issues. At one stage in the series a Brahmi legend *Shahi Deva* is substituted, but this in turn is misunderstood and becomes a decorative scroll that has been mistaken for an Arabic date. In issue there is a series of small letters serving as privy marks below the horseman on the reverse.

### *Silver Coins of Samanta Deva*

The second major group of this coinage has the obverse legend *Sri Samanta Deva*. It is still in good metal, but now with a wider variation in silver content between 60 and 70% and is struck to a slightly lower weight range between 2.9 and 3.9 g. Again we can distinguish a series of issues by the use of Sharada letters and other control marks. Associated chronologically with this group are two comparatively rare issues—one with *Sri Khudavayaka Deva* struck to the distinctly lower weight standard of the Arabic dirhem of the reformed currency introduced by 'Abd al-Malik, possibly to be associated with the Muslim capture of Kabul in A.D. 870—the other with *Sri Bhima Deva* perhaps the King Bhim known from inscriptions to have been the ruler in Hund about A.D. 950.

### *The Shahi Copper Denominations*

The copper issues constituted a complementary denomination that provided the small change for the Bull and Horseman silver. They too suffered a progressive reduction in weight and have privy marks, sometimes echoing those on the silver, that enables us to establish their chronological sequence. The Bull and Horseman coppers of Spalapati, are succeeded by the Lion and Elephant coppers of Vakka and finally the Lion and Elephant coppers of Samanta.

### *The Billon Currency*

The third major group—coins in billon with the Samanta Deva legend that have a silver content of 25 to 30% only shows a sharp reduction from the last silver issue with no progressive debasement that could bridge the gap. The reason seems to have been that the Shahis had exhausted their reserves of bullion and were deprived of the important silver mines

of al-Panjshir which seem to have passed permanently under Muslim control by the middle of the tenth century A.D. This was the billon currency that was copied extensively by the Islamic rulers of Ghazni, and by the dynasties of Kanauj, Ajmir and Delhi.

### *Hoard and Site Finds*

The principal evidence for the distribution of Shahi coins in Afghanistan has so far been drawn from collections made in Kabul and its locality. The arrangement set out above has necessarily been based on internal numismatic analysis; but the sequence of the copper issues has now been tested and confirmed by the stratified finds from the excavations at Damkot near Chakdara in Pakistan (Rahman, 1969: 143–150). A hoard of 199 copper Shahi coins, all of Vakka Deva found in Jalalabad in 1971, a silver hoard all of the last silver issue of Samanta Deva discovered at Shewaki in 1970, a silver hoard of unknown but Afghan provenance (Fig. 5.23) containing three worn coins of Spalapati and three issues of Samanta, offered for sale in Kabul bazaar in 1972, and a silver hoard of some 50 coins of Samanta Deva from Qunduz offered for sale in Kabul bazaar in 1976 will produce important new material for study.

## Settlement, Material Culture, Architecture and Art

The archaeology of Afghanistan for the period following the Graeco-Bactrians and preceding the Muslim conquest suffers from the fact that most of the field researchers who have worked in the area have been more interested in the discovery of monumental architecture and *objects d'art* than in the reconstruction of everyday life and material culture. This attitude has brought about a somehow misleading picture of Afghanistan in the Kushan and post-Kushan period as one of intense religious and artistic activity, but often escapes our efforts to understand the economic and social background of that activity. Such efforts are indeed based chiefly on epigraphy, coinage (often unstratified) and literary sources; only to a much lesser degree are they based on the results of digging in habitation areas.

Actually this kind of excavation, digging out a town with all its successive building horizons and its extension over a large area, calls for a greater financial effort and often appears less rewarding to the eyes of the public, than does the more certain success of the excavation of a *tepe* concealing the remains of a stupa, with rich and attractive sculptural decoration. Unfortunately even the understanding of the ideological level is difficult if not impossible while the socio-economic level of a civilization remains unknown. This is why the many Buddhist architectural complexes that half a century of archaeological excavations have brought to light are mute when we try to understand which social group had them built, for whose use they were intended, who was actually employed in their construction, what social rank or status was occupied by those who planned them and those who decorated them with sculptures and paintings, who was entitled to accept a project and choose the subjects to be represented on a stupa or in a chapel, etc.



**Fig. 5.24:** The Begram Treasure: plaster emblem of an Epehe.



**Fig. 5.25:** The Begram Treasure: engraved crystal cup.

Among the few town sites identified and partially explored Begram first demands attention. This site, which is about 45 km north of Kabul, was noticed in 1833 and then made known to scholars by Charles Masson (Wilson, 1841); A. Foucher identified it with Kapisa, the capital town of several Indo-Greek sovereigns and summer residence of the Kushans (Foucher, 1942–47). The DAFA carried out several limited excavations from 1936 to 1946, covering only a very small portion of the town area: trenches were laid down in the Bazaar (Carl, 1959b) or the “Royal City”, with a gateway (Meunié, 1959b) and a *qala* (Meunié, 1959a: 103–5) almost certainly belonging to a period when the town had lost most of its vitality, in the western section of the town (Ghirshman, 1946), and *extra muros* (Meunié, 1959a: 105–6). The fame of Begram nevertheless rests on the discovery of two rooms (nos. 10 and 13) of what appears to be the “palace” which were found to have been filled with objects of enormous value from the point of view of art history, including plaster models and glass and bronze objects of Western (Hellenistic) origin, Indian ivories and Chinese lacquers (Hackin, 1939; 1954: Figs 5.24–5.31).

A detailed description of the objects found in these “store-rooms” is certainly beyond the scope of this book; nevertheless we deal with this exceptional discovery because of its importance in understanding the nature of the traffic which was carried on, in or through Kapisa, even if the Begram find can only provide information concerning a luxury level of trade.

It is noteworthy that at least one of the doors leading to the two rooms had been blocked up anciently and that the wares found are far from being homogeneous, not only with regard to the origin of the various objects (from Alexandria to India and China, as we have seen) but also of their functions and therefore the reasons that apparently led to their being stored or hidden. There are some objects that must have had great commercial value such as the Indian ivories or the Mediterranean glasses and may therefore have been put in a safe place to preserve them from the hands of enemies, as Ghirshman suggested; but others—especially the plaster models—have no intrinsic value and it is very difficult to imagine that they were kept as precious things in a palace, or that an invading army could look on them as a desirable booty (Gullini, 1961). Others think that the two rooms were “a Customs depot for the receipt of dues in kind collected by the kings or viceroys of Kapisa from the caravans which traversed the adjacent highway in the luxury traffic of Orient and Occident” (Wheeler, 1955: 194). But this explanation too does not find support in the peculiar nature of the objects: principally in the lack of intrinsic value in the case of the plaster models.

We may perhaps solve the problem if we think of some particular purpose in collecting so many and so peculiar art objects, connected with the production of other objects. The two rooms at Begram probably contained wares taken from the “palace” in a moment of danger together with objects belonging to a royal *atelier*: the models for silver ware and possibly also for stucco decorations, even if made of worthless plaster, were certainly precious for an art workshop.

Both the Hellenistic and the Oriental objects have not been unanimously attributed by scholars to a definite period. Differences concern both the Hellenistic wares (Kurz, 1954; Adriani, 1955, 1959; Gullini, 1961; Coarelli, 1961, 1962, 1963; Rowland, 1966) and the Indian ivories (Stern, 1954; Rowland, 1966; Davidson, 1972); in general, however, the time





**Fig. 5.26:** (left) The Begram Treasure: painted glass vase, probably Alexandrian, showing Europa and the bull.

**Fig. 5.27:** (right) The Begram Treasure: Serapis-Hercules in bronze.







Fig. 5.29: The Begram Treasure: ivory relief of Indian workmanship.





Fig. 5.30: The Begram Treasure: incised ivory of Indian workmanship.





Fig. 5.31: The Begram Treasure; engraved top of ivory collar, of Indian workmanship.

span within which the various components of the whole hoard have been placed is from the first century B.C., to the beginning of the third century A.D., the Indian ivories being apparently the earliest (Davidson, 1972). The date of concealment is also puzzling, since the stratigraphic data are vague and indirect.

Ghirshman (1946) tried to establish a stratigraphic succession, including three phases: the first Indo-Greek, the second corresponding to the Great Kushan, the third—following a violent destruction—to the period of the Kushano-Sasanians, up to the Hephthalite invasion that caused the town to be abandoned. The building structures found by Hackin would belong, according to Ghirshman, to the second and third phases; the “palace” would have been destroyed in about the middle of the third century, when the Sasanian emperor Shapur I conquered the Kushans.

We must confess that the whole picture is not altogether clear and several inconsistencies have been pointed out (e.g. Kuwayama, 1974a). Even if it is indisputable that the Begram hoard is a proof of the cosmopolitanism of the Kushan sovereigns to be ranked along with the documents of local artistic activity which will be discussed in the following pages, Begram itself, in the words of Sir Mortimer Wheeler (1955: 195), “Where so little work has yet been done though with such dramatic results, remains a challenge to the explorer”.

An urban site the exploration of which will be certainly rewarding is the ancient town (Shahr-i Kohna) of Kandahar, where a British Mission is currently excavating. The importance of the site was emphasized as a consequence of the discovery of Asokan inscriptions and several contributions dealing with the identification of Kandahar with the *metropolis Arachosias* of Isidorus of Charax as well as with the ancient topography of Arachosia, have added much to our knowledge (Fischer, 1958a; Scerrato, 1964; Fussman, 1966; Fischer, 1967; Bernard, 1974b).

What is visible on the surface is subject to natural erosion but from the aerial photographs, one can still recognize several elements of the pre-Islamic town: (1) the impressively thick fortifications built with mud bricks of  $40 \times 40 \times 10$  cm (such large bricks are not known from the Muslim period), encompassed by a large ditch and dominated by a citadel; (2) two extensions, to the north and south, probably suburbs; (3) a Buddhist monastery with a stupa (Fussman, 1966) (Fig. 5.32).

The diggings at Shahr-i Kohna of Kandahar are now providing something more precise (Fig. 5.33). “On the evidence of the 1975 excavations, the Kushan occupation appears to be the most extensive, apart, perhaps, from the late Islamic occupation. . . . The architecture of this period differs from trench to trench, although the large so-called Kushan brick, measuring up to  $45 \times 45 \times 8$  cm” is found in all sites (A. McNicoll: typewritten preliminary report, 1975). We should here recall that Fussman has recorded the size of  $40 \times 40 \times 10$  cm for bricks in the fortification walls and add that McNicoll himself, in an earlier report of 1975, referred to bricks  $43 \times 43 \times 9/10$  cm in size. This means that at Kandahar there seems to be the same variety of square bricks the Italian archaeologists have noticed at Tapa Sardar, Ghazni, between the Kushan and the Shahi period, the succession being  $43 \times 43 \times 9/10$  (early),  $46 \times 47 \times 9$  c. (middle),  $40 \times 40 \times 10$  or even  $38 \times 38 \times 10$  (late).

The characteristic pottery of the Kushano-Sasanian period at Kandahar is the streak-pattern burnished ware (McNicoll’s “spiral-burnished ware” and “red-pattern burnished

ware" Hammond's (1970: 451-452) "ring-burnished ware") but the information we have up to now is not enough to provide a clearer description of it, the time span suggested being as wide as first century B.C., to seventh century A.D.

In order to complete this roughly drawn sketch of the results of the British excavations at Kandahar, we may also note the interesting circumstances that among the burials there were four in which the skeletons had silver Sasanian coins (probably fifth century A.D.,) in their mouths.

We have already noticed the presence of a town site in the Wardak valley and recorded the suggestion of Fussman (1974b: 86) that some analogies are to be recognized with the plan of Ai Khanum. The pottery collected by Fussman, nevertheless is to be attributed to the Kushan period, most of the comparative material being provided by Begram II.

An important problem concerns the route connecting Arachosia (Kandahar) with Kapisa (e.g. Bombaci, 1957; Bernard, 1974b): it is not impossible that this route or one of the alternative routes passed through the town at Wardak, certainly rich and flourishing, as it appears from the Buddhist monasteries built in its immediate vicinity and the dam that probably gave water to the town by means of a canal. Fussman (1974, 88) believes that he has found traces of this canal but cannot say whether it brought water only to the ditch or also into the town.

Though later, another town site may be recorded here, since it was probably on the same route connecting Arachosia to Kapisa, but closer to Ghazni. It is now a group of mounds in the Jagatu-i Wardak, where some very limited trial trenches were dug by Scerrato in 1958, which "may probably be considered a village born as a resting place on the caravan-road, protected by the fortress of the Bad-i Asya and dependent on the settlement of Tabak-sar" (Scerrato, 1967: 21). The importance of the site is also documented by the presence of two inscriptions in Graeco-Bactrian cursive script but these, like the coins and sherds, point to a date after the Great Kushans: actually, sherds from big storage jars bearing the impressions of large medallions with "Hephthalite" (but probably Hindu Shahi) Graeco-Bactrian cursive inscriptions have accidentally been found on or near the *tepe* of Dubakh Sar (Scerrato's "Tabak-sar").

The Dubakh Sar *tepe* is certainly an imposing fortified centre dominating what was probably an important caravan route, and one might reasonably expect to find more such strongholds in the region—as well as further minor centres similar to that excavated by the Italian Mission. Indeed, among the many *tepe* in the Ghazni region, one may recall the imposing Takht-i Jamshid, in the valley connecting Wardak with Lugar (Lohgar), where huge "Gandharan" walls of schist slabs and blocks are still standing along with mud-brick structures; and the many small mounds scattered on the plain between Moqur and Dila, north of the Ab-i Estada.

The study of town sites in Afghanistan is often based on criteria that are not agreed by all scholars. Such is the case with square and round towers in the town walls; Fussman (1974b: 89-92), dealing with the dating of the ancient town in the Wardak valley (foundation before or in the time of Huvishka), summarizes the problem as follows, starting from the fact that the town walls of Wardak are strengthened by round towers.

Central Asian town walls, at least since the Graeco-Bactrian period, have square, often



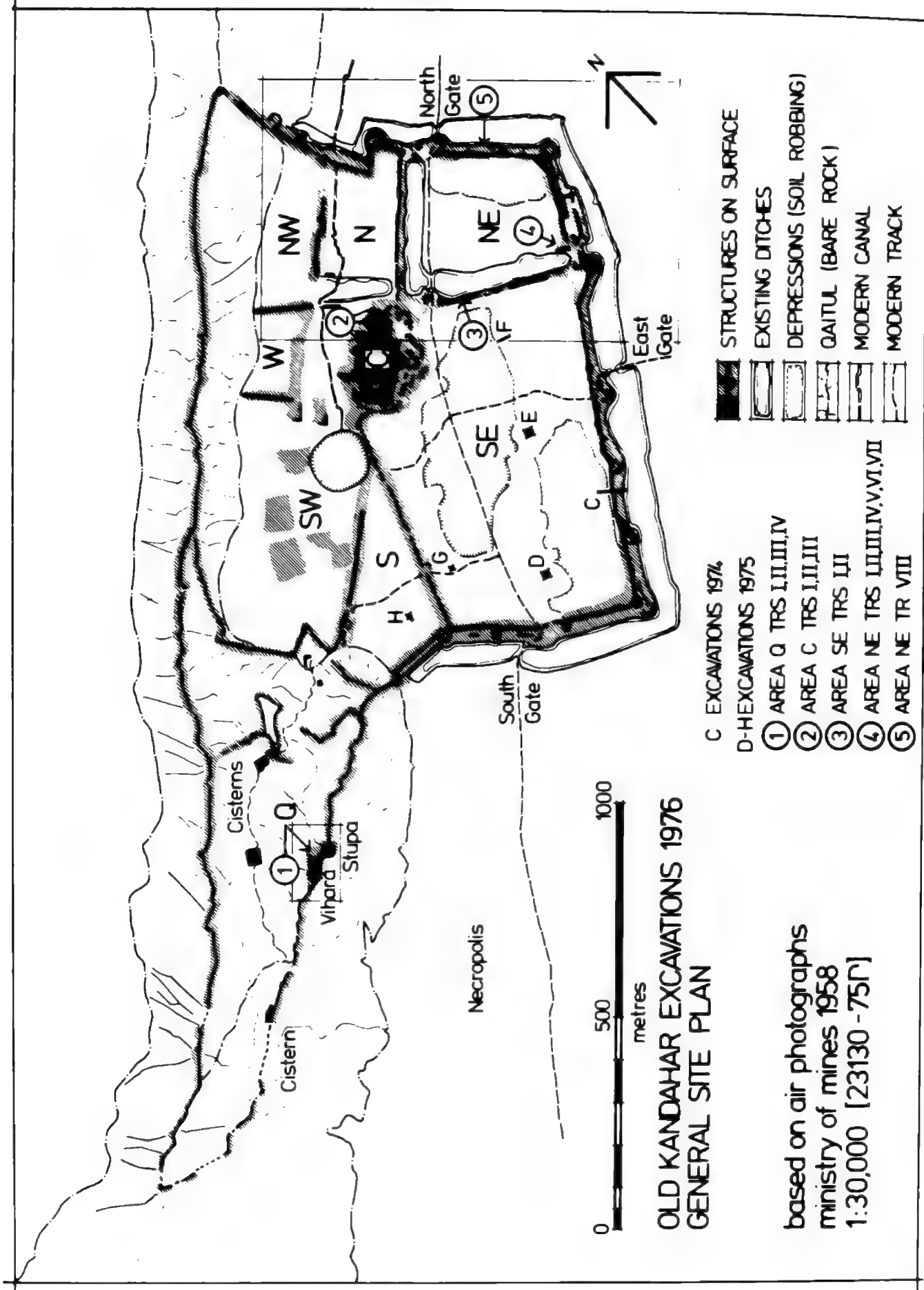


Fig. 5.32: Kandahar: plan of the old city, after Helms.

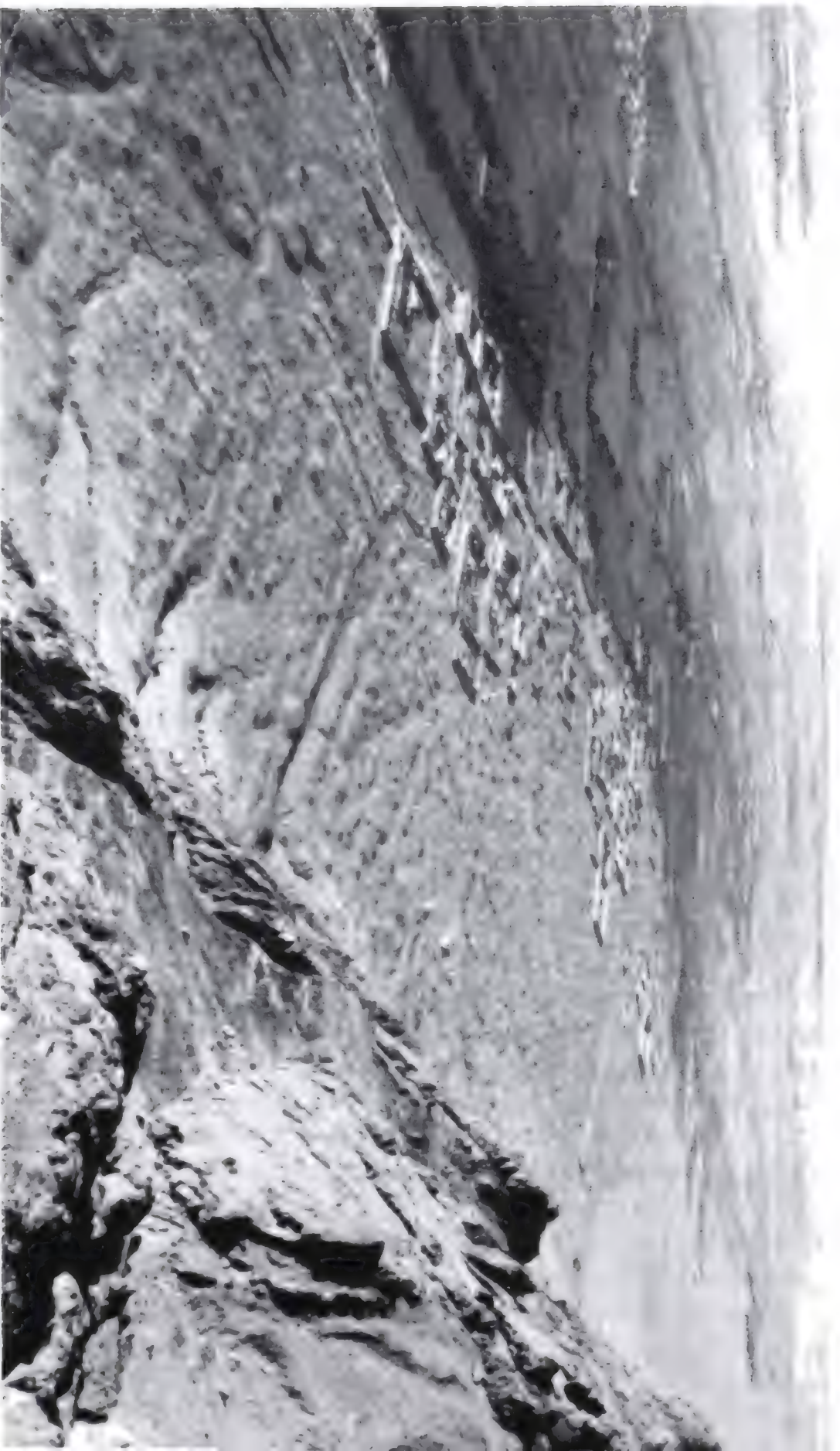


Fig. 5.33: Kandahar: view of old town from ridge.

massive, towers or bastions: e.g. at Ai Khanum (Bernard, 1970: 317) Balkh (Le Berre and Schlumberger, 1964), Shahr-i Banu (Carl, 1959a), Dalberjin Kazan Tepe (Kruglikova and Sarianidi, 1971: 27–42, plan Fig. 10; Kruglikova, 1974: Ch. III, Figs 32–34 and plan Fig. 1), and in northern Bactria. South of the Hindu Kush, this technique is known at Begram (Ghirshman, 1946: 16–17) and Sirkap (Marshall, 1951: I, 114; Dar, 1973: 57–72). These square towers continued to be in use in the Kushan period, even when the structures underwent works of enlargement or modification. At Surkh Kotal, built under Kanishka, the outer temple wall and the town walls have only square towers (Schlumberger, 1964: plan p. 326; 1969, plan Fig. 26). The same is true of the Gandharan reliefs that reproduce fortification walls, most of which are to be dated in the Kushan period. That is why, Fussman says, Schlumberger thought that Sirsukh (Taxila) with its semi-circular towers (Marshall, 1951; Dar, 1973: 57–72) was not a foundation of Vima Kadphises or Kanishka, as Marshall and Ghirshman (1946: 39) believed, but belonged to the post-Kushan period. Since the exclusive use of round towers in a complex system of fortifications is not known in Parthian Iran and first appears probably under Shapur I (for alleged Sasanian influence in Afghan fort architecture, see also Tar-o-Sar: Hackin, 1959c), Schlumberger thought that Sirsukh could not be earlier than A.D. 260. If the first year of Kanishka is to be placed between A.D. 78 and 144, both Sirsukh and the town in the Wardak valley are necessarily much later than Kanishka and his successor Huvishka. Nevertheless, as we have already mentioned, the pottery sherds collected by Fussman in the town of Wardak are all Kushan, which again makes plausible the dating of Marshall and Ghirshman. It seems therefore that northwest India and Afghanistan in the second century A.D., employed semi-circular and probably also round towers in their fortifications (Fussman, 1974b: 91–2).

This subject is dealt with also by Kuwayama (1974a), who begins by stating that the bastions in the Amu-darya valley are traditionally square, covering the time span from the period of the Greek rulers to that of the Sasanian hegemony. According to him, the round bastion at Kohna Masjid, near Surkh Kotal (Bernard, 1964), which is a late addition (the site being contemporary with the Sasanians and later than the Great Kushans), is “an exceptional intrusion and repercussion from the neighbouring countries”. He also adds that the homeland of this kind of bastion is presumably the region south of the Hindu Kush.

Kuwayama also suggests that there is a close inter-relation between the round bastions and the use of pottery with a stamped medallion decoration, peculiar to the regions south of the Hindu Kush. He recalls that this kind of pottery was recognized as a new device in Begram III by Ghirshman (1946: 69) and was found at the Begram Bazaar (Meunić, 1959a: 104), the Saka fort (Carl, 1959c), Tapa Maranjan (Fig. 5.34) (Meunić, 1942), all sites where round bastions are also found.

In his attempt at establishing a date for Begram III, Kuwayama gives great importance to “the simultaneous existence of both cultural elements, the round bastions and the stamp decorations of the medallion types, at Kohna Masjid”—a simultaneity which is “against the tradition of the region”. This “should be a reflection of the phenomena” that occurred on the south side of the Hindu Kush after the fifth century A.D. The existence of round bastions and of that particular type of pottery on both sides of the Hindu Kush “should not be regarded as a chance event”. Therefore, Kohna Masjid is taken by Kuwayama as “a counterpart of the

monuments south of the Hindu Kush'' that can give Begram III (when round bastions make their appearance) a date later than the one suggested by Ghirshman.

This strict cultural relationship between the round bastions and the medallion-stamped pottery does not seem to find further support elsewhere. For instance, Fussman (1974: 91) remarks that his surface sherding in the ancient town of the Wardak valley has given practically no specimen of that kind of pottery. He thinks that the medallion-stamped pottery makes its appearance some time after the reign of Vasudeva, i.e., towards the end of the second or the beginning of the third century A.D., (same date suggested by Gardin, 1957b: 27).

The same date is probably to be attributed to the miniature fortress with square, round and semi-octagonal bastions, found in the Buddhist complex of Tapa Sardar near Ghazni (Taddei, 1972a), which is also connected with medallion-stamped pottery (Taddei, 1968; figs 67-70).

The same kind of pottery was also found at Guldara in Lugar (Lohgar) (Fussman, 1947b: 91, f.n.4), Jagatu-i Wardak (Fig. 5.36) (Scerrato, 1967: 20, Figs 48-49), Chanwar, near Gardez (Fischer, 1969: 341, pl.14), Chaqalaq Tepe, near Qunduz (Mizuno, 1970: pl 52) and elsewhere.

A place of particular importance in the archaeology of the Kushan period in Afghanistan is occupied by the royal sanctuary of Surkh Kotal, Bactriana (Schlumberger, 1952a, 1954, 1955, 1960, 1961, 1964b, 1970: 59-66; Ward-Perkins, 1965; Schippman, 1971: 492-496), set in the very centre of a fortress, that we know from epigraphic evidence to have been founded by Kanishka himself.

It consists of two parts (Fig. 5.35). At the top of the hill (west), in a court surrounded by a portico there is a temple with a cella encompassed by a corridor; on the east side of the hill the area is divided into four terraces connected to each other and to the upper court by monumental flights of steps. Schlumberger observed that the building technique at Surkh Kotal as well as the plan of the temple are to be placed in the Iranian tradition as it is represented chiefly by Achaemenian architecture: mud bricks being used along with stone, the latter for the stairways, some plinths and the column bases; the plan of the main building, the temple, being quite similar to an Achaemenian temple near Susa.

It has been suggested that this is a fire-temple and this identification is usually accepted, based as it is on the evidence of the excavation (platform in the centre of the cella, accessible by a flight of steps) and on the comparison with Iranian presumed prototypes. Nevertheless, as Schlumberger himself remarks (1970: 61-62), nothing leads us to believe that it was a Zoroastrian fire; it is much more probable that it was a 'dynastic' fire, as is suggested both by the epigraphic evidence and by the comparison with the sanctuary at Mat near Mathura, on the Ganges plain.

The sculptural decoration of the temple is an unparalleled mixture of different artistic trends. It includes stepped merlons of Oriental tradition, a Gandharan stone frieze, a series of unbaked and painted clay figures, a very badly damaged stone relief which Schlumberger suggested was to be compared with some of the enthroned figures of Nimrud Dag, Commagene (middle of the first century B.C.), and three stone statues representing Kushan kings (or gods?) (Fig. 5.37). These latter may be compared with the Kushan images of Mathura (Rosenfield, 1967), not only in some details of the dress (which has certainly nothing in



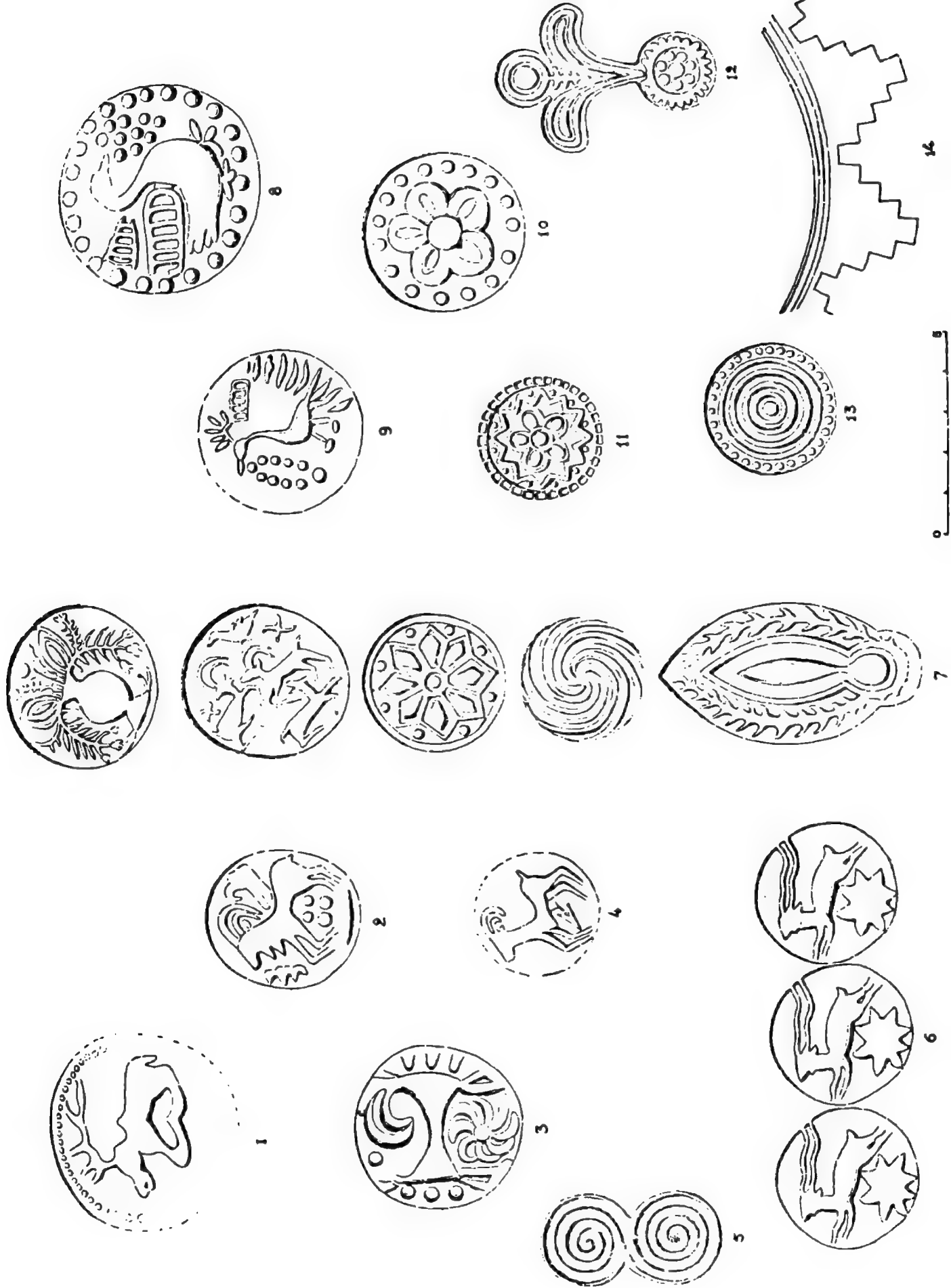


Fig. 5.34: Tepe Maranjan: motifs decorating stamped pottery (after Carl).



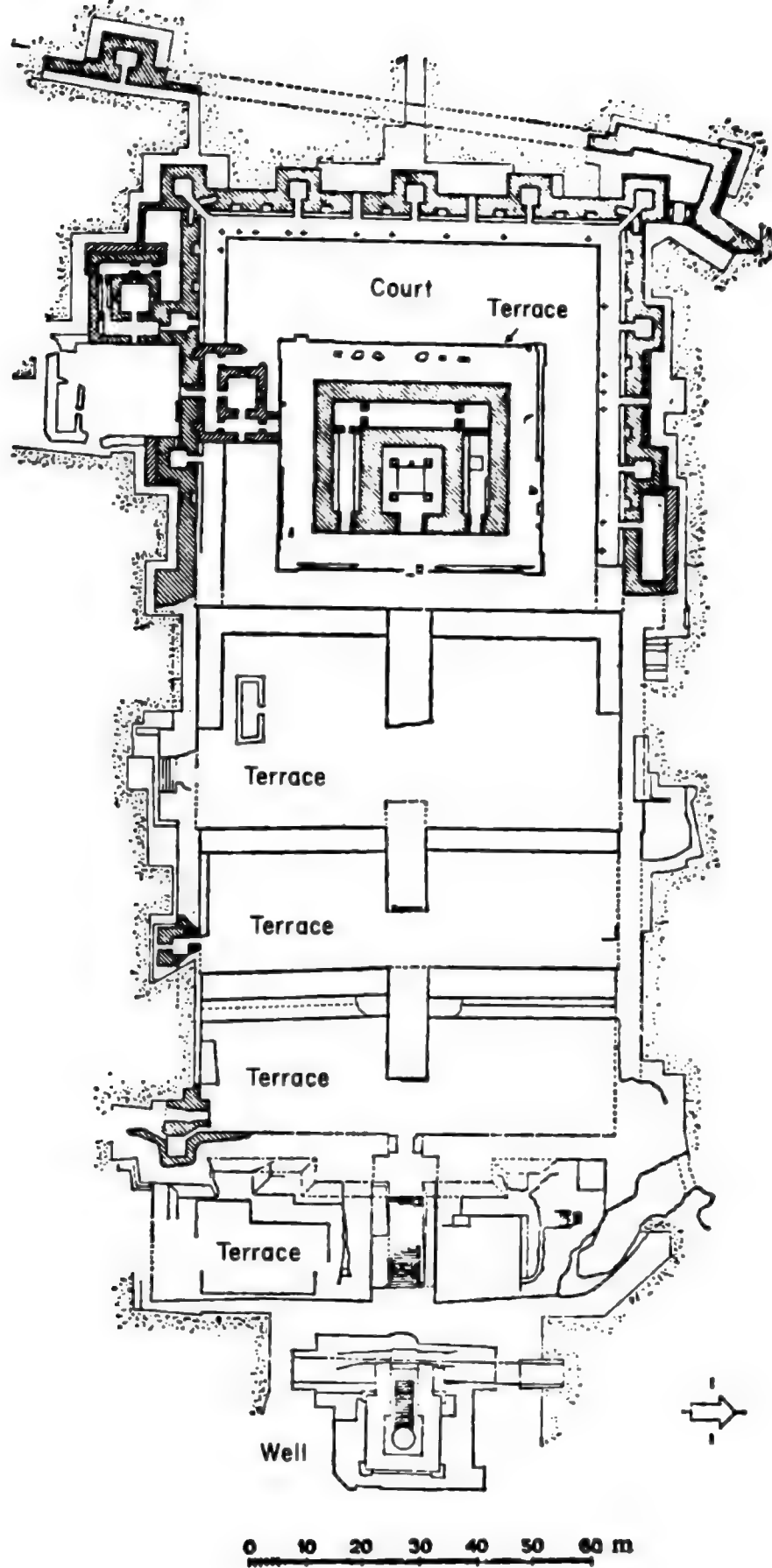


Fig. 5.35: Surkh Kotal: plan of site.



**Fig. 5.36:** (far left) Jagatu-i-Wardak (presumed provenance): stamped medallion on a pottery jar. Diameter 6.5-7 cm.

**Fig. 5.37:** (middle and right) Surkh Kotal: royal portrait sculpture.

common with either Classical or Indian costume, and is rather Iranian or "nomadic") but also for stylistic and technical reasons: chiefly because they do not reproduce the volumes of human figures but are rather slabs on which folds and ornaments are superficially carved.

From the point of view of religious architecture, the archaeology of Afghanistan of this period shows us a picture that at first appears almost exclusively Buddhist. Apart from Surkh Kotal there are some interesting exceptions that will be discussed when we deal with the artistic products of Tapa Skandar (Kuwayama, 1972a, 1974b; Kuwayama-Momono, 1976) and Khair Khana (Hackin, 1936), both near Kabul, and Chigha Sarai in the Kunar Valley (Lohuizen, 1959).

Afghanistan is very rich in monumental Buddhist stupas built of stone, chiefly preserved in the Kabul Valley and Kapisa. These are usually attributed to the Kushan period, though a chronological sequence is still to be established, and are considered in G. Fussman's work on the *Monuments bouddhiques de la région de Caboul*, of which the first volume has recently been published by the DAFA (Fussman-Le Berre, 1976).

For the time being we may list the groups of Jalalabad and Kabul (Wilson, 1841), surveyed by the Japanese Mission (Mizuno, 1971, for the stupas of Guldara, Shevaki and Topdara, see also Carl, 1959c; Lézine, 1964 for the stupa of Guldara, Fussman-Le Berre, 1976, is now exhaustive), the group of Wardak (Fussman, 1974b), the stupas of Tapa Sardar (Taddei, 1968), that of Kham-i Zargar (Mustamandi, 1968), and that of Kandahar (Fussman, 1966: 37-9).

Another typical monument of Buddhist Afghanistan is the cave monastery. It is hardly necessary to recall here the world famous caves of Bamiyan with their colossal Buddhas and "Indo-Iranian" paintings (Godard, 1928; Hackin, 1933, 1959b), to which others have been recently added in the Folangi valley (Scerrato, 1960; Dagens *et al.*, 1964). For most people Bamiyan (Figs 5.38, 5.39) is somehow synonymous with Afghanistan, such is the impressiveness of its rock-cut monastic caves and the two huge Buddhas which aroused the admiration of the Chinese pilgrim Hiuen-Tsang (seventh century). He wrote about the bigger (and later) of the two, 53 m high (Fig. 5.40): "On the declivity of the hill to the northeast of the capital was a standing image of Buddha made of stone, 140 or 150 feet high, of a brilliant golden colour and resplendent with ornamentation of precious substances" (translation of Watters, 1904-05). Both the Buddhas and the caves were finished and coated by means of stucco and clay plaster: for instance the folds of the bigger Buddha's cloth were obtained by modelling the plaster on cores of ropes which were nailed to the image (i.e. to the rock) by wooden pegs. This greater Buddha seems to be assignable to the fifth to sixth centuries on account of both the paintings inside the niche, which reflect themes from the Ajanta paintings, and its own style which seems rather to be reminiscent of the Gupta sculptures of Mathura. A discussion of the style and chronology of the Bamiyan paintings would take us beyond our present scope (Fig. 5.41). Influences from several regions have been pointed out, Iranian (Sasanian), Gandharan and Indian. These provide a general picture of the art centre which clearly points towards Central Asian solutions (Rowland-Coomaraswamy, 1938; Bussagli, 1963; Hallade, 1968; Rowland, 1970): a recent attempt at a classification into four styles has been made by a team from Kyoto University (Miyaji, 1976). There are related cave groups in the Bamiyan area, including those at Kakrak with the wall painting of the "hunter king" (Fig.

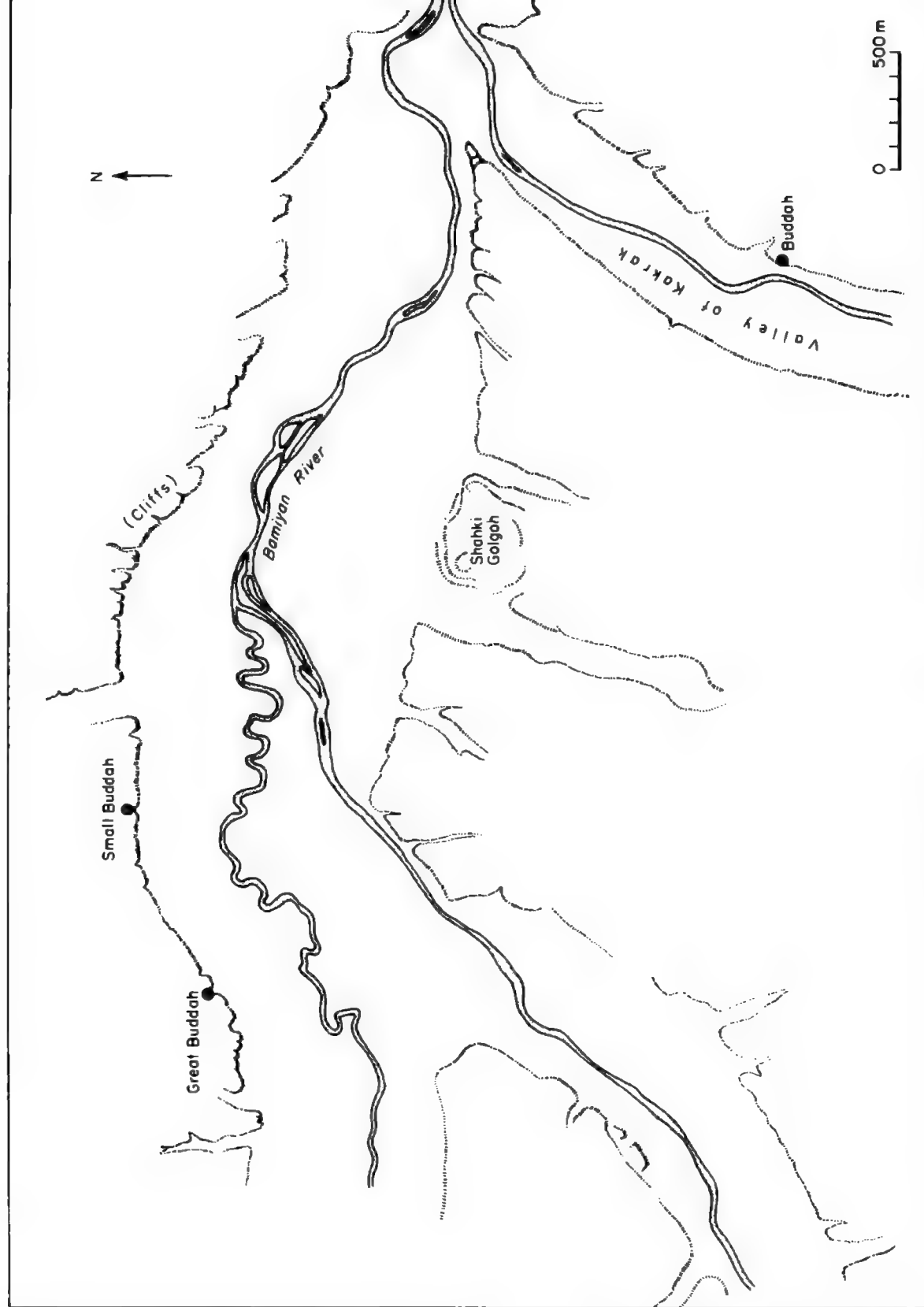


Fig. 5.38: Bamiyan: map of valley.





**Fig. 5.39:** Bamian: view from Shahr i Gholghola, looking north to the cliff with the two colossal Buddha figures and numerous cave monasteries.



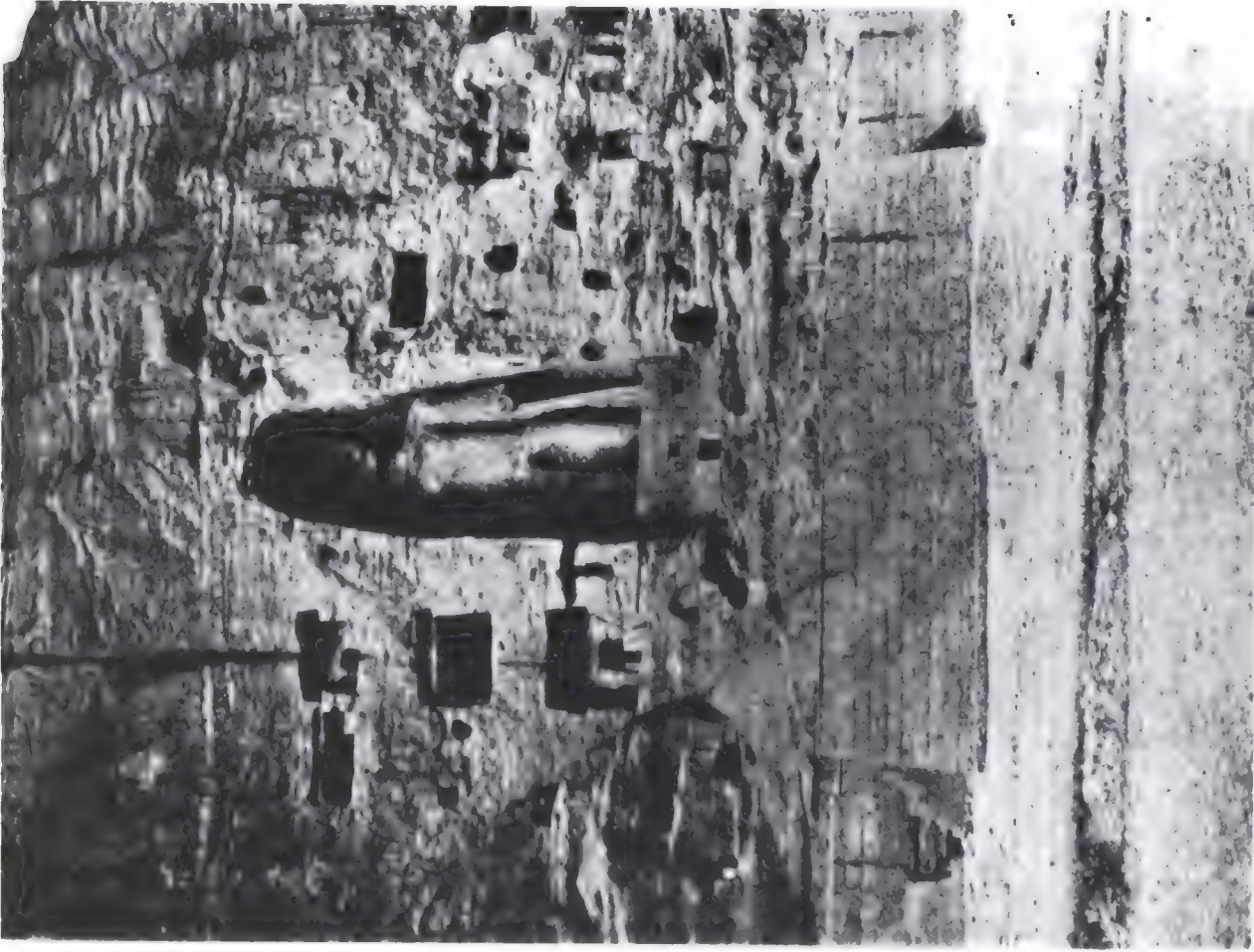


Fig. 5.40: (left) Bamiyan: the lesser Buddha figure.

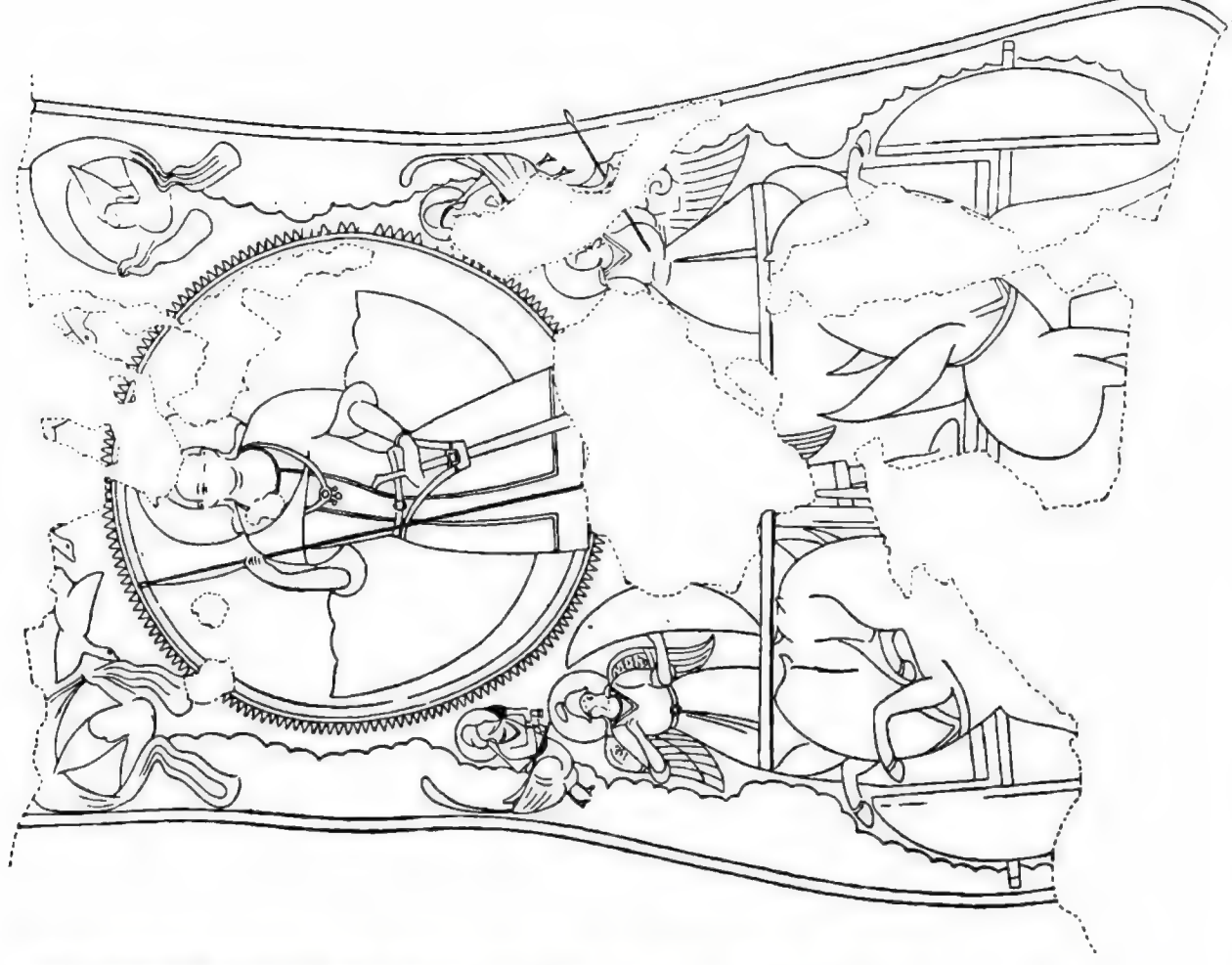
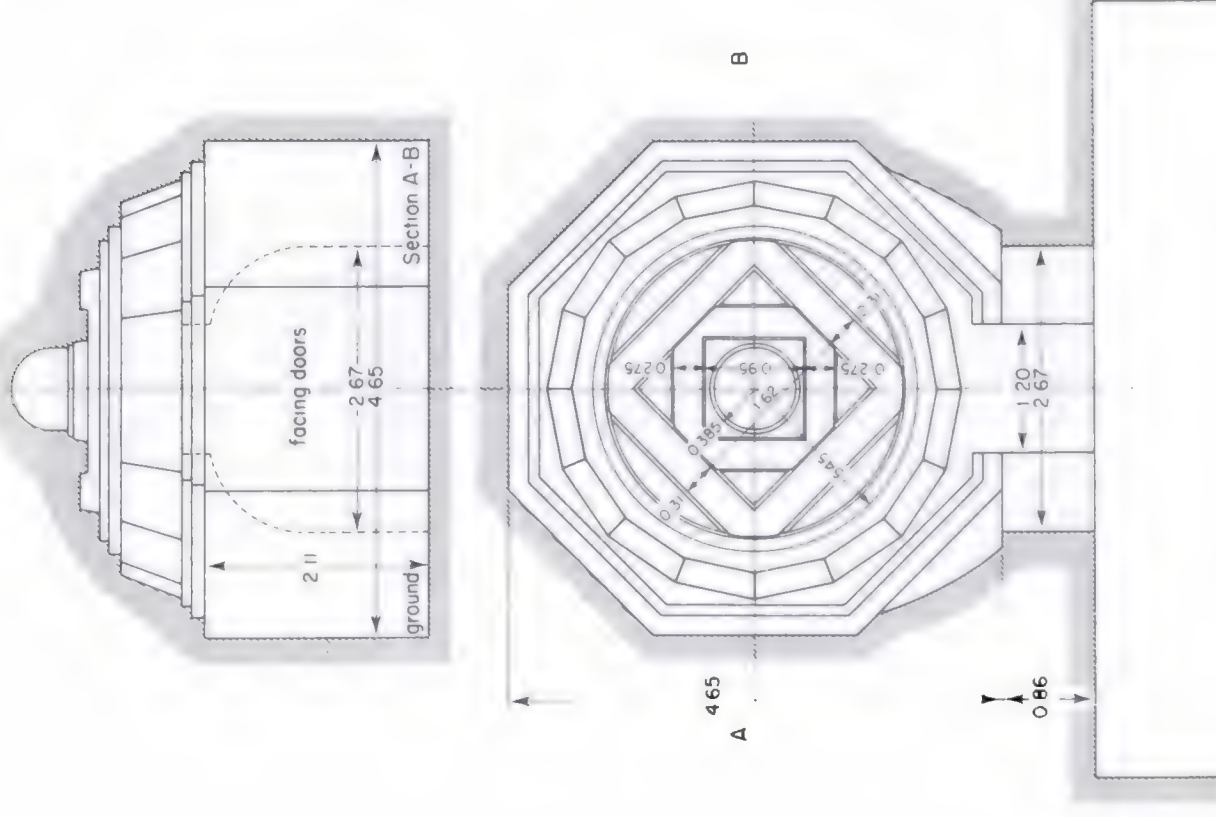


Fig. 5.41: (right) Bamiyan: wall painting in the crown of the niche of the lesser Buddha figure.



**Fig. 5.42:** (left) Bamiyan: plan and section of the octagonal room in sanctuary A, cave monastery complex.



**Fig. 5.43:** (right) Kakrak: wall painting of the "Hunter King", 5th-7th century.

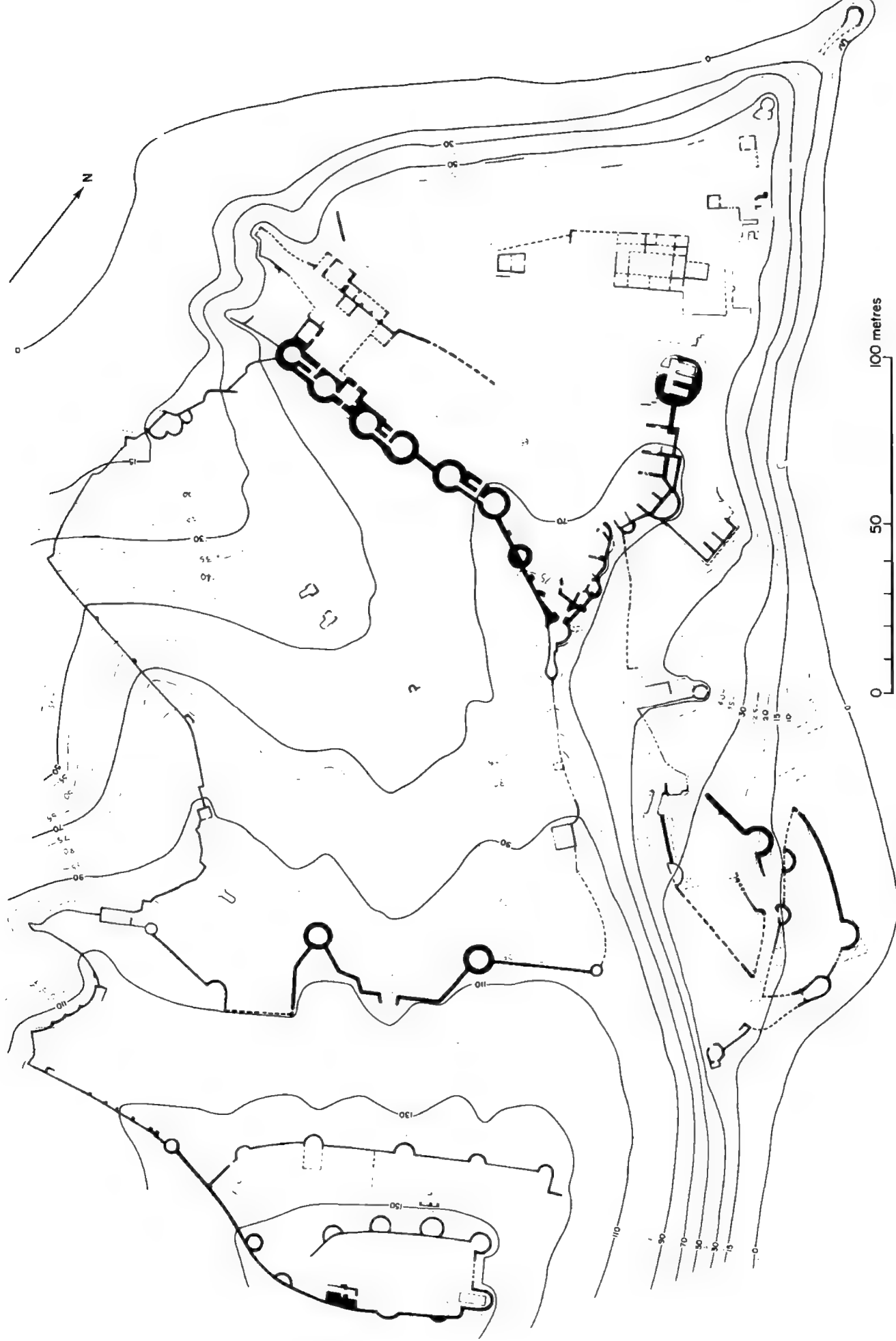


Fig. 5.44: Shahr-i-Zohak: plan of palace and fortifications, survey Allchin 1951.





Fig. 5.45: Shahr-i Zohak view from south of lower fortified enclosure.

5.43) (Hackin and Carl, 1933; Ghirshman, 1948), datable to the sixth to seventh centuries. The brick fortress of Shahr-i Zohak nearby was probably constructed in the same period, though renovated in Muslim times (Codrington, 1944: 888) (Figs 5.44, 5.45).

Other cave complexes are known but they show neither the complexity of Bamiyan nor its richness in sculpture and painting decorations: we may recall that of Haibak, close to a famous rock-cut stupa (Mizuno, 1962), that of Hazar Sum, near Haibak, the date and even function of which are still somewhat obscure (Puglisi, 1963; Mizuno, 1967), the Buddhist caves of Fil Khana near Jalalabad (Mizuno, 1967) those of Basawal, between Jalalabad and the Khyber Pass (Mizuno, 1971) and those recently discovered at Humay Qala near Qarabagh-i Ghazni (Fig. 5.47) (Verardi, 1977) and others in the same zone of the Ghazni province, discovered in 1976 by the Italian Mission.

The problems concerning sculptural and pictorial works of art are also many and many-sided. We have already briefly dealt with the "dynastic" images of Surkh Kotal; the fragments of unbaked-clay sculptures are totally different from the point of view of style and show clear influence of the Hellenistic tradition (Schlumberger, 1960: 142–53; 1961: 90; 1970: 63–6). We can also recognize a similar influence in the unbaked-clay sculptures from Khalchayan, Transoxiana, that Pugachenkova (1965, 1966, 1971b) considers one of the earliest expressions of art commissioned by the Kushans (first century B.C.) and of the greatest importance for the understanding of later developments (Pugachenkova, 1969).

We are in a phase of transition from the Greek art of Bactria to Gandharan art, the documents of which are neither so numerous nor so well-known as those of Gandhara. Nevertheless, excavations are now giving an increasingly clear definition to this tradition which flourished in a period when Afghanistan was not yet culturally Indianised. At the same time an artistic output of Classical tradition is known also from the North West Frontier Province of Pakistan: here the excavations of the University of Peshawar (Dani, 1965–66) have shown that, with very few exceptions, this region had no Hellenised products in the time of the Graeco-Bactrian kingdoms but only a traditional terracotta art represented by the so-called "Baroque Ladies" (for this class of objects, see Wheeler, 1962: 104 ff.) and other mainly female figurines of a very simplified shape. It is only during the following periods, called "Scytho-Parthian" and "Early Kushana" by Dani that a Hellenising taste spreads over this area.

Here then is documented a Hellenizing artistic phase that precedes Gandharan art and differentiates itself from it by the absence of Indian elements. It can well be considered as the expression of social strata broader than those that commissioned the purely Greek art of Ai Khanum and obviously also broader than the groups, closely connected with the dynasty, that caused the unbaked-clay sculptures to be made in the official building of Khalchayan and in the sanctuary of Surkh Kotal.

The Italian excavations in the earlier layers of Tapa Sardar are now throwing some fresh light on this period (Fig. 5.46). These layers are simply a thick filling that derives from the destruction of a rich decorative complex made of unbaked-clay sculptures (Figs 5.48–5.50) (most of them accidentally burnt by the fire that destroyed the sanctuary) that are to be connected stratigraphically with stupas similar in technique (Fig. 5.51) to those of the Kabul-Kapisa and Jalalabad areas (Taddei, 1972a: 553–4; 1972b).



The clay sculpture of the earlier phase at Tapa Sardar, in its manifold aspects, is undoubtedly to be included in the tradition of Bactrian Hellenism and shows affinities with the clay images from Surkh Kotal, with those from Tapa Maranjan, near Kabul, a Buddhist sanctuary of uncertain date (Carl and Hackin, 1959; but very late according to Fussman-Le Berre, 1976: 95–9: sixth to seventh centuries A.D.), and also with the sculpture of Transoxiana, later than Khalchayan, found at Dalberjin Tepe, attributed by Pugachenkova (1971a, 1971b) to the second century A.D., as well as with Gandharan art.

It is therefore evident that when Gandharan art was flourishing in northern Pakistan and in the eastern region of Afghanistan, the other parts of this country had a cognate though different art of Hellenistic tradition which is nevertheless documented also in the eastern region itself, at Hadda (Fig. 5.52) as the recent Afghan excavations are showing. Another promising site from this point of view is Basawal (Mizuno, 1971: pl. 22.1).

Even Gandharan art proper calls for a thorough re-examination of its Afghan products. This is usually considered as characterized by the almost total absence of schist reliefs and by the predominance of stucco in an output which is placed between the third and fifth centuries A.D. The only well-known Gandharan schist reliefs from Afghanistan are those from Paitava, Shotorak, and Begram (Kapisa) (Fig. 5.53), and are closely linked to a dynastic environment (Hackin, 1925–26; Meunié, 1942; Soper, 1949–50; Bussagli, 1956–57: 198–205; Rosenfield, 1967: 200–1; Taddei, 1974a). Actually the fact that the schist reliefs from Hadda were published only a few years back (Dagens, 1964) (Fig. 5.54) is due to the curious choice made by Barthoux (1930: 1933) in publishing his excavations.

New Gandharan schist material has been found at Kham-i Zargar (Mustamandi, 1968). Other, still little known, stylistic trends in the Gandharan style from Afghanistan have been located in the region of Baghlan, which yields typical limestone reliefs (Fig. 5.55) (Fischer, 1958b; Mizuno, 1962: Figs 96–104, 122–6).

The Afghan excavations at Tapa Shotor, Hadda (Fig. 5.56) are very promising: they have revealed the presence in the same sanctuary (and contemporarily in use if not contemporarily in execution) of purely Gandharan stucco sculptures (for many other examples in the area (Fig. 5.57): Barthoux, 1930, 1933; Mizuno, 1968) and of unbaked-clay sculptures that rather recall those of Tapa Sardar, Tapa Maranjan and Surkh Kotal (Mustamandi, 1969, 1971, 1973, 1974). An examination of the stratigraphic and structural connections between the stupas decorated with stucco images and the niches containing unbaked-clay sculptures (some of them in the round, as in the case of the so-called ‘aquatic niche’) is still to be carried out; (Kuwayama, 1973); for the time being we must content ourselves with the group of much worn Sasanian bronze coins found in one of the latest stupas, that seem to belong to Shapur III (383–388 A.D.), and with the possible comparisons with other sculptural complexes in the area. It is quite probable that the unbaked-clay sculptures of Tapa Shotor do not cover a short period but are the result of additions over a considerable span of time; this would explain the great differences between some of the most Hellenising images, such as the Herakles-Vajrapani (Mustamandi, 1974), and the ‘aquatic niche’ (Mustamandi, 1969) that even recalls a clay relief from Pendzhikent (Belenitski, 1959, pls XXVII–XXIX, XXXI–XXXII; Taddei, 1972a: 556).

Unfortunately very little or nothing is known of pictorial art in Afghanistan during the

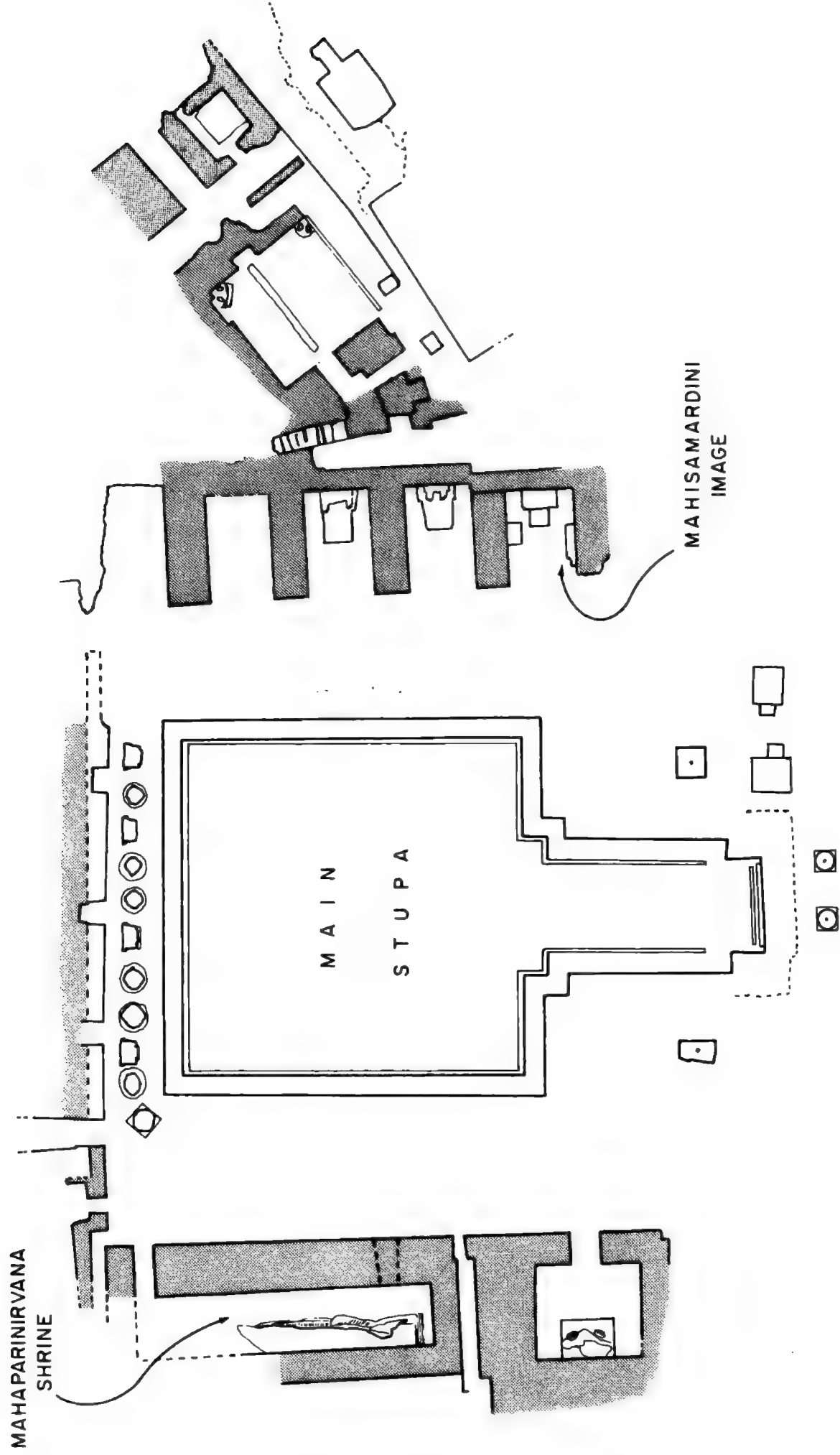


Fig. 5.46: Tapa Sardar; Ghazni: plan of excavations.



Fig. 5.47: (left) Humay Qala: the Buddhist monastic cave complex, near Qarabagh, Gihazni.



Fig. 5.48: (middle) Tapa Sardar: male head from earlier period, Bodhisattva (?); originally unbaked clay, height 18 cm.

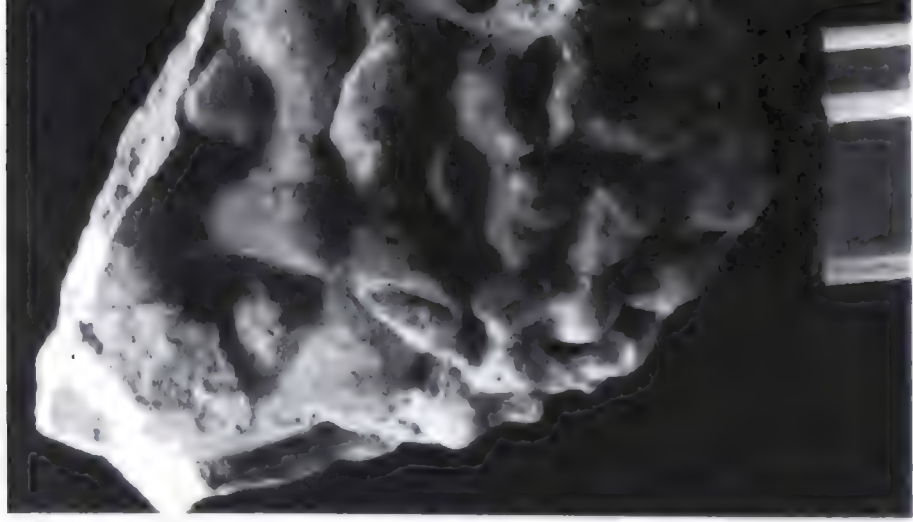


Fig. 5.49: (right) Tapa Sardar: bearded head from earlier period, Bodhisattva Vajrapani (?); originally unbaked clay, height 5.5 cm.





**Fig. 5.50:** Tapa Sardar: remains of a row of standing Kushan donors in shrine 63, belonging to earlier period, partially covered by the Parinirvana Buddha of the later period (on the right). Unbaked clay with traces of burnish.

Kushan period, but we can easily imagine that the Gandharan school of sculpture had its counterpart in painting, just as it had in Central Asia, for instance at Kara Tepe, near Termez (Staviskij, 1972: pls IV–V) and even at Miran, in Chinese Turkestan (Bussagli, 1963: 21–27). Only a few remains survive from Hadda that may be roughly attributed to the Kushan period (Barthoux, 1933: 162–4; Mustamandi, 1969: 22–3); actually the importance of Afghanistan from the point of view of the history of painting rested entirely on the later Buddhist wall decorations from Bamiyan and the nearby cave complexes of Kakrak and Fōladi (usually attributed to the fifth to seventh centuries A.D.) and a few other examples from Dakhtar-i-Noshirvan (Rowland, 1946, 1970), Fondukistan (Hackin, 1959a), Tapa Sardar (unpublished) and Basawal (Mizuno, 1971: plans 15–16), dateable to the seventh to eighth centuries A.D. The north of the country, where some very recent excavations are modifying this picture, is



Fig. 5.51: Tapa Sardar: Stupa no. 20; wall facing of schist slabs, pilasters of sandstone.

probably the place from which non-Buddhist paintings will be found increasingly as research continues.

Let us first record the discovery of a polychrome painting (homage to a hero?) at Dalberjin Kazan Tepe, (Fig. 5.58) 40 km northwest of Balkh (Kruglikova and Sarianidi, 1971; Kruglikova, 1974; 59 ff., Fig. 41a, pls 17–18). It is to be compared with the paintings from Balalyk Tepe (southern Uzbekistan) that the Soviet archaeologists date to the end of the fifth/beginning of the sixth century A.D. (Al'baum, 1960). The dating proposed for this painting of Dalberjin Kazan is first half of the fifth century, on the basis of coin evidence.

But this painting is not the earliest among those found at Dalberjin Kazan; indeed it appears to be one of the latest. The temple of Dalberjin Kazan, in its first phase—attributed by Kruglikova to the Graeco-Bactrian period—had its facade decorated with a painting



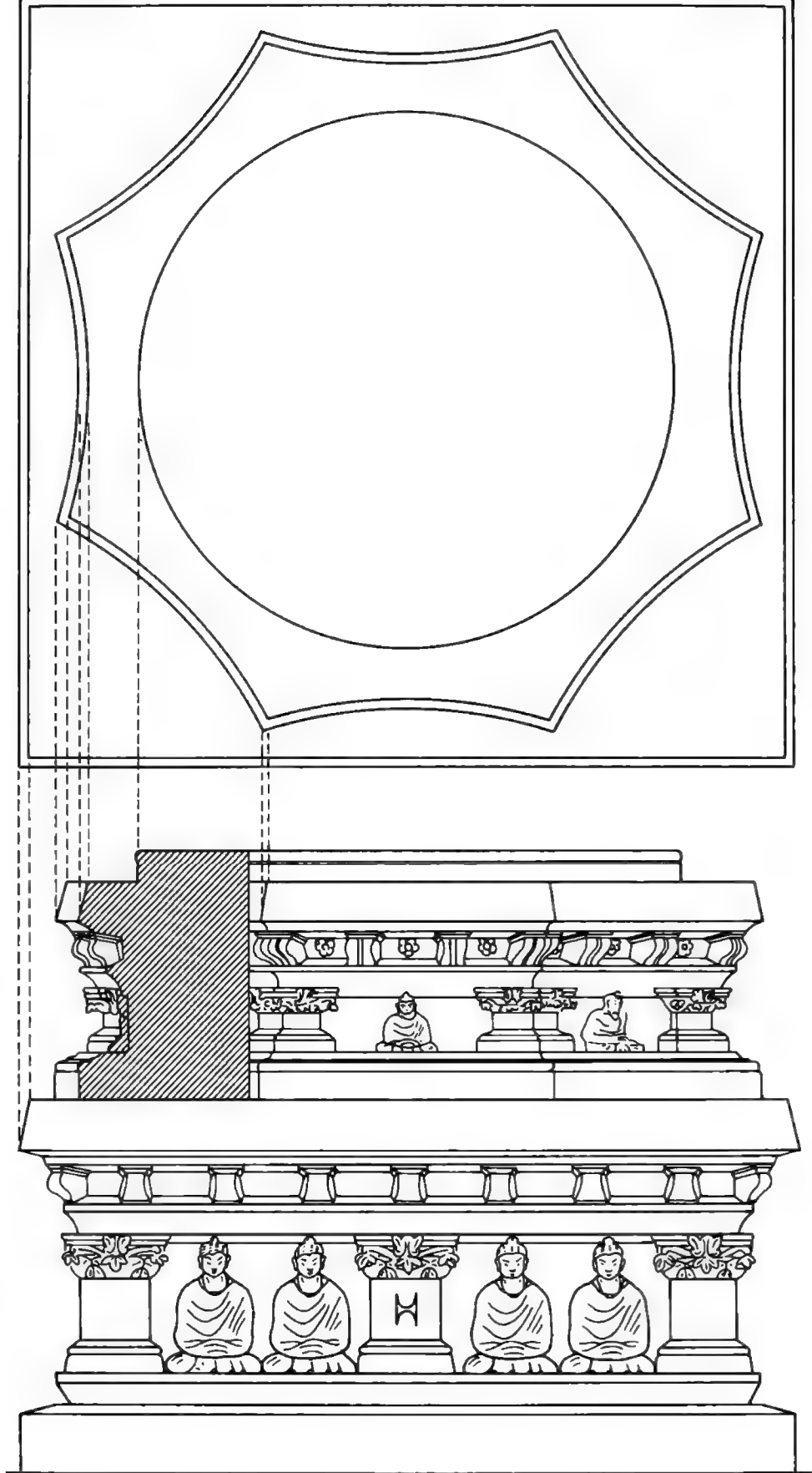


Fig. 5.52: Hadda: plan and front view of Stupa 121 at Tapa Kalan.



**Fig. 5.53:** Begram: schist stele of the Buddha performing the great miracle of Sravasti; from Sarai Khwaja.



**Fig. 5.54:** Hadda: fragment of schist relief.



**Fig. 5.55:** Qunduz: fragment of relief in Gandharan style, presumably from Qunduz region; white limestone, 20 × 21 cm.

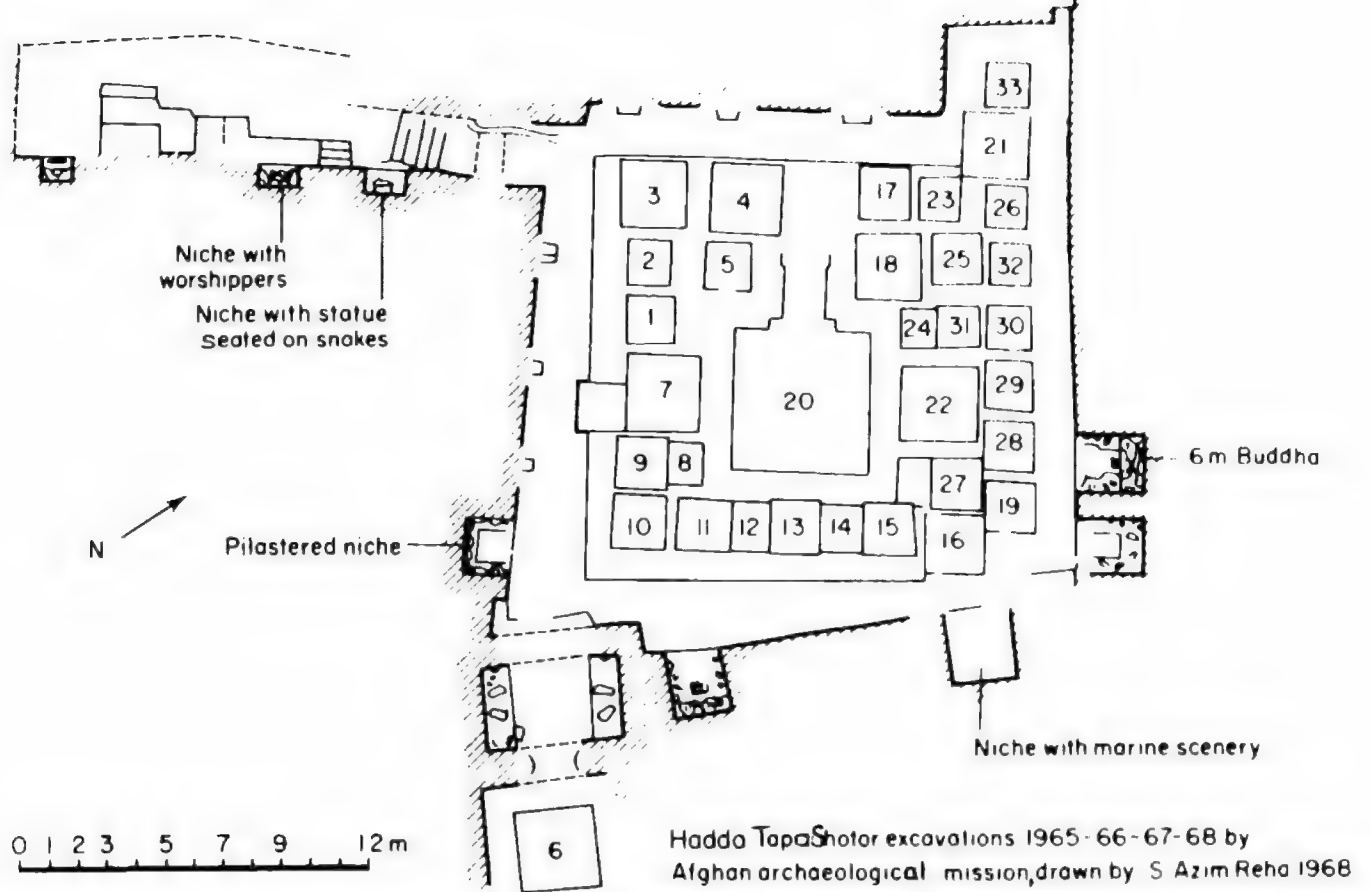


Fig. 5.56: Hadda: plan of the excavations at Tapa Shotor, 1965-67.



Fig. 5.57: Hadda: stucco sculpture of worshipper.





**Fig. 5.58:** Dalberjin Kazan Tepe: wall painting in the temple depicting Siva and Parvati (after Kruglikova).



**Fig. 5.59:** Gardez: Durga *Mahisasura-mardini*, marble, seventh to eighth century (?).



representing the Dioskouri with their horses, while another painting on a later wall of the same temple depicts Siva and Parvati seated on Siva's vahana, the bull, between devotees (Kruglikova, 1974, Ch. II). Kruglikova does not commit herself on the chronology of this Siva painting, nor does she propose any definitive chronology for the other paintings of Dalberjin Kazan. Iconography does not seem to be very useful in the dating of the Siva panel, especially because the two deities' heads are lost; moreover we have to rely chiefly on line-drawings and water-colours (which, even when accurate, are obviously interpretations) since neither colour nor black-and-white photographs have been published as yet. We may only point out that the devotee standing on Uma-mahesvara's left side wears a long kaftan, bound at the waist, that looks much more like some figures in the wall-paintings from Balalyk Tepe or Pandzhikent (the most recent book on Pandzhikent is Belenitski, 1973) than any known representations of the Kushan period.

The fifth century A.D. is indeed a crucial point for the North West of India and Afghanistan and it is to this century that the marble image of Surya from Khair Khana was first attributed (Hackin, 1936). Scholars are now rather inclined to date this and the other marble sculptures of Hindu subjects from north Pakistan and east Afghanistan (Fig. 5.59) to the period of the Shahi dynasties (Turki Shahis and Hindu Shahis; only Turki Shahis according to Kuwayama, 1972b), usually between the seventh and the tenth centuries (Barrett, 1957; for other bibliographical references, Kuwayama, 1972b; Taddei, 1973a, b). Nevertheless we must confess that very little stratigraphic evidence is available and that the soundest data are provided by comparisons with the bronzes, mainly Buddhist, produced in Swat and Kashmir between the eighth and the tenth centuries A.D., (Barrett, 1962; Pal, 1973, 1973-74, 1975). Though these bronzes do not appear to have enjoyed a wide diffusion in Afghanistan, some of them are reported to have been bought there and one was certainly found in Hazarajat, central Afghanistan, but was later lost (reproduced on the cover of *Afghanistan* (1955) 10 no. 4).

Nor do we get much help from another almost contemporary non-Buddhist religious monument, that anyhow deserves a special mention because it appears to be quite unique in the territory of Afghanistan, though it is reasonable to think that further excavations and surveys will provide parallels: the site is Chigha Sarai in the Kunar valley, where some ancient fragments incorporated in the tombs of a Muslim cemetery were noticed by members of a Danish expedition between 1947 and 1954 (Edelberg, 1957: 1960). Professor van Lohuizen-de Leeuw (1959) put them in the right historical perspective by stating that the fragments from Chigha Sarai (a few are now housed in the National Museum of Afghanistan, Kabul) indicate the existence at that site "of a temple belonging to the middle phase of the mediaeval architecture or North West India of about the eighth or the ninth century", that possibly the shrine was dedicated to the linga cult, and that "the stones in question prove for the first time that the North West Indian style of medieval architecture extended as far as Eastern Afghanistan, a fact which the previous finds of images belonging to the contemporaneous school of sculpture had already made highly probable".

The Japanese excavations at Tapa Skandar have provided very good chronological data for the "Shahi" marble sculptures: a group of Siva and Parvati (Uma-mahesvara) was found there that cannot be assigned to a period before the seventh to the eighth century or even later, on grounds of both palaeographical and archaeological evidence (Fig. 5.60) (Kuwayama, 1972a).



**Fig. 5.60:** Tepe Skandar: Uma-mahesvara, sculpture in marble, seventh to eighth century. (Courtesy: Kyoto University.)



Fig. 5.61: Fondukistan: the royal couple, in painted clay, seventh century (?)



Fig. 5.62: Tapa Sardar: row of clay stupas and thrones on the eastern side of the main stupa; later period, c. eighth century.





**Fig. 5.63:** Tapa Sardar: A detail of the unbaked clay sculpture in chapel 37: left hand *naga*; later period, c. eighth century.

Both these classes of objects, Hindu marble sculptures and bronze images, are to be considered, along with the temple of Chigha Sarai and some at least of the paintings of Bamiyan, as documenting a widespread Indianization. This phenomenon is to be understood in terms of at least two Indian trends, one being northwestern (temple of Chigha Sarai and Buddhist bronzes), the other rather Gupta in tradition (especially the "Indian-style" paintings of Bamiyan).

We may recall another class of objects, small in size, made of a very compact "schist" stone (casket lids, portable sanctuaries, small images, etc.) that were probably produced in the northwest of India at the same time as the bronze images and were certainly also introduced into Afghanistan, though there is no evidence that they were also made there; these objects are characterized by a peculiar technique of very flat relief and a very clear "Sasanian" influence (e.g., Pal, 1973-74; Francfort, 1975).



Fig. 5.64: Tapa Sardar: A detail of the unbaked clay Parinirvana Buddha in shrine 63; later period, c. eighth century.

Strictly connected with all these classes of sculptures are the unbaked-clay images from Fondukistan (Fig. 5.61), a sanctuary excavated by the DAFA and attributed to the seventh century on the ground of some Arabo-Sasanian coins (Ghirshman, 1948: 28–9; Hackin, 1959a), and those from the later phase of Tapa Sardar (Fig. 5.62–5.64), presumably to be dated to the seventh to eighth and even into the ninth century A.D. (Taddei, 1968; 1972a, 558–60). These two sites have provided documents of exceptional value from the point of view of both iconography and style, such as the “royal couple” (Fig. 5.61) and the bejewelled Buddha (Rowland, 1961) from Fondukistan, the two Nagas supporting the stem of a lotus on which the Buddha was seated, a subject found both at Fondukistan and Tapa Sardar, the colossal *parinirvana* Buddha at Tapa Sardar (Fig. 5.64) (Taddei, 1974b) that finds a precise counterpart in the *parinirvana* of Adzhina Tepe (southern Tajikistan), a site that is yielding sculptural and architectural material very similar to that of Afghanistan (Litvinski and Zejmal,





**Fig. 5.65:** Tapa Sardar: multiple mould (also other side) used to obtain decorative plaques for clay stupas, thrones, etc.; plaster, 14.4 × 2.2 × 3.5 cm. From left: pilaster with shaft made of *amalaka*; standing Buddha in *varadamudra*; Yaksha/Atlas; seven petalled rosette. Later period, c. eighth century.



**Fig. 5.66:** Gudul i Ahangaran; Ghazni: an inscribed clay tablet from inside of miniature stupa; Buddhist profession of faith.

1971a, b) another Central Asian Buddhist site quite close to the sanctuaries of Afghanistan is Kuva, in ancient Ferghana (Bulatova, 1972).

For the history of religion, the most interesting find is certainly the image of Mahishasuramardini (a form of the Hindu goddess Durga) found at Tapa Sardar (Taddei, 1973a, pl. 15-5). This is the first instance of a Hindu deity placed in an otherwise purely Buddhist context in Afghanistan. It has been observed (Taddei, 1974b: 115) that the sanctuary of Tapa Sardar probably belonged to the upper classes: we have but scanty evidence, for instance, of those "popular" cult objects such as miniature stupas and inscribed tablets of clay (Fig. 5.66) that have been found in numbers at other sites near Ghazni and belong to the same late period (Taddei, 1970). Also the introduction of a Hindu image into the sanctuary seems to support this view, since the marble sculptures of the "Shahi" period, which were certainly produced for the upper classes and the court (as it is shown by their small number and comparatively previous medium), almost exclusively represent Hindu deities.

This is therefore one more point that archaeology is able to make clear in the religious history of pre-Muslim Afghanistan, a subject that already owes much to field research (Pugachenkova, 1974).

Nevertheless we do not have sufficient evidence to place these cultural data in a more precise historical context, such as we do have in Central Asia, where the farm-palace of Balalyk Tepe (Al'baum, 1960), for instance, tells us so much about the social and economic organization and therefore allows us to understand more fully the ideological background of the paintings found there and, to some extent, elsewhere in Central Asia. Most of that we can surmise for Afghanistan and Central Asia, though historical religious data often point to different directions (for Central Asia, see Belenitski and Marshak, 1971).

Lastly, we cannot disregard the importance of digging in the few graveyards to be found from pre-Muslim Afghanistan. One of these, at Said Qala Tepe, about 25 km west of Kandahar, has yielded very few funeral offerings but the study of the skeletons could lead to some tentative conclusions about the social structure of the people buried there (Shaffer and Hoffman, 1971). The graves have been attributed to the Kushano-Sasanian period and are probably to be connected with the puzzling cave settlement of the nearby Shamshir Ghar (Dupree, 1958).

The exploration of the latter site and, more recently, of Aq Kupruk (Balkh Province, north Afghanistan) has led Dupree to point out that

While the monumental religious sites and urban secular centres were in full swing, and elaborate commercial routes criss-crossed the area, the peasant-tribal society dominated the socio-economic scene; it is thanks to these cave sites that we have now "some evidence of the daily, annual, and life cycles of the common people, the bulk of the population, the perpetrators of the fundamental cultural patterns. The occupations of the caves during this period were probably temporary (as in modern times), the occupants being either nomads, semi-nomads, or semi-sedentary groups (Dupree: personal communication).

The cave of Shamshir Ghar (Dupree, 1958), possibly a refugee site, contained a variety of Kushano-Sasanian objects: Indo-Sasanian and Sasanian seals; Red Streak Pattern Burnished pottery; iron and bronze horse trappings; and bronze (particularly the trilobate type) projectile points, etc. (For pottery, see also Kolb, 1973).



**Fig. 5.67:** Aq Kupruk: objects from early period: pottery, clay spindle whorls, carnelian bead, bronze projectile points.



Fig. 5.68: Aq Kupruk: objects from later period.





**Fig. 5.69:** (upper) Aq Kupruk: grave pottery, jug of Aq Kupruk IV type. Height 13 cm.

**Fig. 5.70:** (lower left) Aq Kupruk: grave pottery, two handled jar of Aq Kupruk IV type. Height 26 cm.

**Fig. 5.71:** (lower right) Aq Kupruk: grave pottery, bottle of Aq Kupruk IV type. Height 12 cm.



Two rock shelters at Aq Kupruk (Dupree, 1972) yielded specimens of peasant tribal art and utilitarian objects of the period under discussion. The excavators uncovered two levels at Aq Kupruk I (Snake Cave), with the following ranges in C-14 dates: Early period, a.d. 200-450; Later period, a.d. 450-600.

Important finds of the former included (Fig. 5.67): flint and bone implements; many unidentified iron fragments; several bronze trilobate projectile points, socketed projectile points, bracelets, etc.; glass, terracotta, carnelian beads. An extensive painted pottery series was found, including black on buff surface, but red on buff dominated. Designs included: free-flowing, repeated spirals; wavy lines; chequer motifs; naturalistic and stylized faunal and floral designs, etc. Undecorated red and buff utilitarian wares occurred in great profusion. Faunal remains have been identified as domesticated sheep, goat, cattle and horse.

The later period finds in Aq Kupruk I included a series of livestock-retaining walls of *pakhsa* and sun-dried bricks and several large storage jars. A series of fragmented, defaced Buddhist paintings occurred in an upper chamber. The pottery consisted of Red Streak-Pattern Burnished wares, a variety of painted wares (red or black on buff surface being dominant; repeated spirals the dominant motif) plus a buff ware with wavy, comb-marked striations, punctuation and applied sheep/goat horns (Fig. 5.68).

Aq Kupruk IV (Skull Cave) contained an intensive burial area (10-11 human skeletons) and probably dated from the fifth to sixth centuries A.D. Grave furniture (richer than that found at Said Qala Tepe) included: two complete Red Streak-Pattern Burnished plates; a pottery lamp, a cup and an unguent (?) jar; a bronze mirror and other bronze ornaments and projectile points; iron weapons and horse trappings; a silver ring with a lapis setting; carnelian and lapis lazuli beads. Figs. 5.69-5.71 show pottery grave vessels of this period, all chance finds.

Another site of the period, Tepe Shahidan, just east of Khulm (Samangan Province, northern Afghanistan), has yielded an important ceramic sequence (now being studied by C. White) "and should illuminate the daily lives of the peasant farmers who furnished the economic base for the Hephthalite satrapies north of the Hindu Kush and the Kushan satrapies of the south" (Dupree: personal communication).

One may further mention a sondage in the mound of Pol-i Zak, near Qala Shaharak in the western Hindu Kush mountains about 260 km east of Herat (Dupree, 1972: 8-9), where the C-14 dates of the earlier stratigraphic period fall into the Kushano-Sasanian (possibly late Hephthalite) period; and of the results obtained by Leshnik at Qala Ahingaran, also in central Afghanistan (Leshnik, 1967), that seem to agree with the dates from Qala Shaharak, "although many of the painted pottery motifs superficially resemble those of the late Indus valley ceramics" (Dupree, 1972: 9).

This "minor" culture of pre-Muslim Afghanistan does not seem to share many of its characters with the much richer and better documented nomadic burial sites of the "Kushan" period in the Kafirnigan valley northern Bactria (southwestern Tajikistan) (Mandel'shtam, 1966, 1975). These are actually older (end of the second century B.C., to the beginning of the first century A.D.) and seem to be the remains of the nomad tribes that crushed the Graeco-Bactrian kingdoms.



# 6

## From the Rise of Islam to the Mongol Invasion

K. Fischer

### Historical Background

With the overthrow of the Sasanid empire, Khurasan and Seistan became provinces under Arab governors, but the early Muslim invasions effected no permanent control over the Kabul region, which remained semi-independent under native princes entitled *rutbil* (or *zunbil*), even after the transfer of the Caliphate from the Umayyads to the Abbasids in 750. In the reign of the Caliph Mamun (813–829) one of these local rulers accepted Islam and his territory was joined to the imperial postal service (*barid*); but in the tenth century his successors appear to have been pagan once more.

### The Tahirids and Saffarids

Mamun had obtained power with the aid of his lieutenant Tahir b. al-Husain, a Persian, whom he rewarded with the governorship of Khurasan and whose family continued to rule the province after his death. Under the Tahirids (820–873), Khurasan was virtually independent of the central authority; but a far greater threat to the Caliphs' power arose in Seistan. Here, in 866, another native, Yaqub b. Laith, whose surname *al-Saffar* ("the coppersmith") betrays his plebeian origins, seized the province and began to extend his sway over the neighbouring territories, occupying Kabulistan (871) and destroying the Tahirids two years later. Although both Yaqub and his brother and successor Amr (879–900) extracted recognition from the Caliph, their attempts to establish their power in Khurasan met with constant opposition. It was Amr's efforts to assert his authority over Transoxiana, now under the hereditary governorship of the Samanids (864–999), however, which brought about his downfall. He was defeated and captured by the Samanid Ismail b. Ahmad (875–907), and sent a prisoner to Baghdad (900). But the Samanids, who thus acquired Khurasan, were unable to exercise more than a tenuous control over Seistan, which even during the tenth century revolted under scions of the Saffarid dynasty and from 1002 was to remain continuously under the rule of a line of princes who may or may not have been of Saffarid extraction; while to the east the native rulers of Kabul again became independent. Under the Samanids the cities of Samarkand and Bokhara flourished and became great centres of Iranian Islamic culture.

## The Ghaznavids

The Samanid epoch witnessed the beginnings of a new phenomenon, the appearance in the eastern Islamic world of dynasties of Turkish origin. The Caliphs themselves maintained a corps of Turkish slave guards at least as early as the ninth century, when their decline enabled the Turks for some decades to exercise a stranglehold upon the government. In the east, the pattern was the same among the provincial governors. In 962, Alptegin, a Turkish slave general of the Samanid ruler, was ousted from the governorship of Khurasan after a palace revolution, and made for Ghazni, where he defeated the native chief and established his own base. This may be regarded as the date of the definitive Muslim conquest of the region. His immediate successors were of little significance, but in the following decade power was seized by a slave of Alptegin's, Sebuktegin, who founded the dynasty properly known as the Ghaznavids (977–1186). Initially, Sebuktegin and his still more energetic son Mahmud (997–1030) ruled Khurasan nominally as governors for the now moribund Samanids; but when in 999 the latter were overthrown by an invasion of Turks from Central Asia, this *de jure* subjection came to an end. The Samanid territories were now divided between Mahmud and the new power, the Qarakhanids, with the Oxus as the frontier between them.

Under Ghaznavid leadership there was a second burst of Muslim expansion eastwards. The Arab campaigns of the early eighth century had conquered Sind for Islam, but beyond it the Punjab and the rest of the sub-continent had remained Hindustan—"the land of the Hindus". The reigns of Mahmud and of his son Masud (1030–1041) witnessed the beginnings of the Muslim drive into India proper. Even by the time that the Hindu Shahi rulers of Kabul had been finally eliminated (1019), a series of brilliant campaigns into the heart of northern India had brought great quantities of plunder back to Ghazni, and had extended Muslim rule over the western Punjab. The achievement was all the more remarkable in that Mahmud was simultaneously engaged in sporadic warfare with the Qarakhanids beyond the Oxus and in the conquest of large areas of western Iran, where he appeared as a Sunni champion of the Caliphs against the regime established in Iraq by the Shiite Buyid dynasty. In the event, however, this function was to be appropriated, together with the Ghaznavid possessions lying west of Afghanistan, by the Seljuks.

The Qarakhanid invasion of Transoxiana had constituted merely the vanguard of a wave of inroads by free Turkish tribes into western Asia that were to be spread over a hundred and fifty years. In the first decades of the eleventh century the Seljuks, an Oghuz tribe who had been quartered on the lower Jaxartes, began to press on Mahmud's province of Khurasan. At first they were accepted as Ghaznavid clients, but in Masud's reign they could no longer be contained. In 1037 their leaders took over western Khurasan and assumed the insignia of sovereignty. Masud took up arms against them, only to be routed decisively at Dandanqan (1040). Within the next ten years the Seljuks, who went on to conquer the rest of Iran and to occupy Baghdad in 1055, even threatened Ghazni, but were repulsed. Ghaznavid power in Khurasan and Seistan was now a thing of the past; but the abandonment of these western provinces at least enabled Masud's successors to concentrate on the reduction of Hindustan. Under Ibrahim (1059–1099) peace was made with the Seljuks and lasted through the reign of his son Masud III (1099–1115), thereby affording the Ghaznavid empire a period of stability

and consolidation. Under Bahram Shah (1118-1157), however, who had obtained the throne with the assistance of the Seljuk Sultan Sanjar and was obliged in consequence to become his vassal, the decline of the dynasty set in.

## The Ghorids

The chieftains of Ghor (Ghur), the mountainous region east of Herat, had suffered a number of invasions by Mahmud and had recognized Ghaznavid overlordship. With the growth of Seljuk influence in Afghanistan Ghor became subject for a time to Sanjar, but its rulers were already powerful enough to challenge the Ghaznavids. After a series of engagements Ghazni itself was ruthlessly sacked in 1151 by the Ghurid ruler Ala al-din Husain, who thereby earned the sobriquet of *Jahan-suz* ('the world-burner'). He was subsequently defeated in an attempt to throw off Seljuk suzerainty; but this proved to be only a temporary reverse.

In the period 1125-1140 Central Asia had been invaded by the Qarakhitai, refugees from north China who reduced the Qarakhanids to the status of subordinate rulers. Their arrival set in motion once more the Oghuz tribes settled on the lower Jaxartes, and Khurasan was overrun a second time. Sanjar, who tried to check them, was defeated in 1153 and carried off into humiliating captivity; and in 1163 the Oghuz occupied Ghazni. But this burst of energy soon dissipated itself, leaving the Ghorids as the more powerful element in the eastern Islamic world. Junior members of the dynasty ruled in Firuzkoh and Bamiyan, but the main line was represented by the brothers Ghiyath al-din and Muizz al-din, who were able to recover from the Oghuz not merely Ghazni (1173) but Herat also (1175), and in 1186 they finally extinguished the remains of the Ghaznavid principality at Lahore. Even before this, Muizz al-din had assumed direction of the Muslim drive into India and had given it fresh momentum: his campaigns and those of his generals may be regarded as the foundations of Muslim domination in the sub-continent. Nevertheless, the dynasty's military activities were not restricted to India; and this was to prove its undoing.

## The Khwarizm-shahs

The eclipse of Seljuk power had created a vacuum in Khurasan which was in part filled by the rulers of Khwarizm to the north. Themselves descended from a Turkish slave of the Seljuks, the Khwarizm-shahs had remained dissident vassals of Sanjar until the end. Then they began to expand southwards at the expense of local Oghuz leaders and so clashed with the Ghorids. Initially, the balance in the conflict was against them, and by 1200 they had been driven out of more of Khurasan, but Muizz al-din, who by the death of his brother in 1203 was to become sole head of the dynasty, overreached himself. His invasion of Transoxiana, now under the Khwarizm-shah's influence, in 1202 was a disaster of the first magnitude; and his assassination in 1206 while preparing to avenge it left his empire with no effective ruler. While his generals in India assumed practical independence, his weak and ephemeral successors in Ghor and



Ghazni were gradually reduced by the Khwarizm-shah, Muhammad b. Takash (1200–1221), who occupied both territories in 1215–6. Muhammad, whose father had destroyed the last of the Seljuks in western Iran in 1194, was now the master of a dominion that extended from Hamadan to the Indus and from western Transoxiana to the borders of Seistan. Yet within five years his ambition had led him to challenge the new power founded in Mongolia by Chinggis Khan and his vast empire had been swept away by the Mongol invasion.

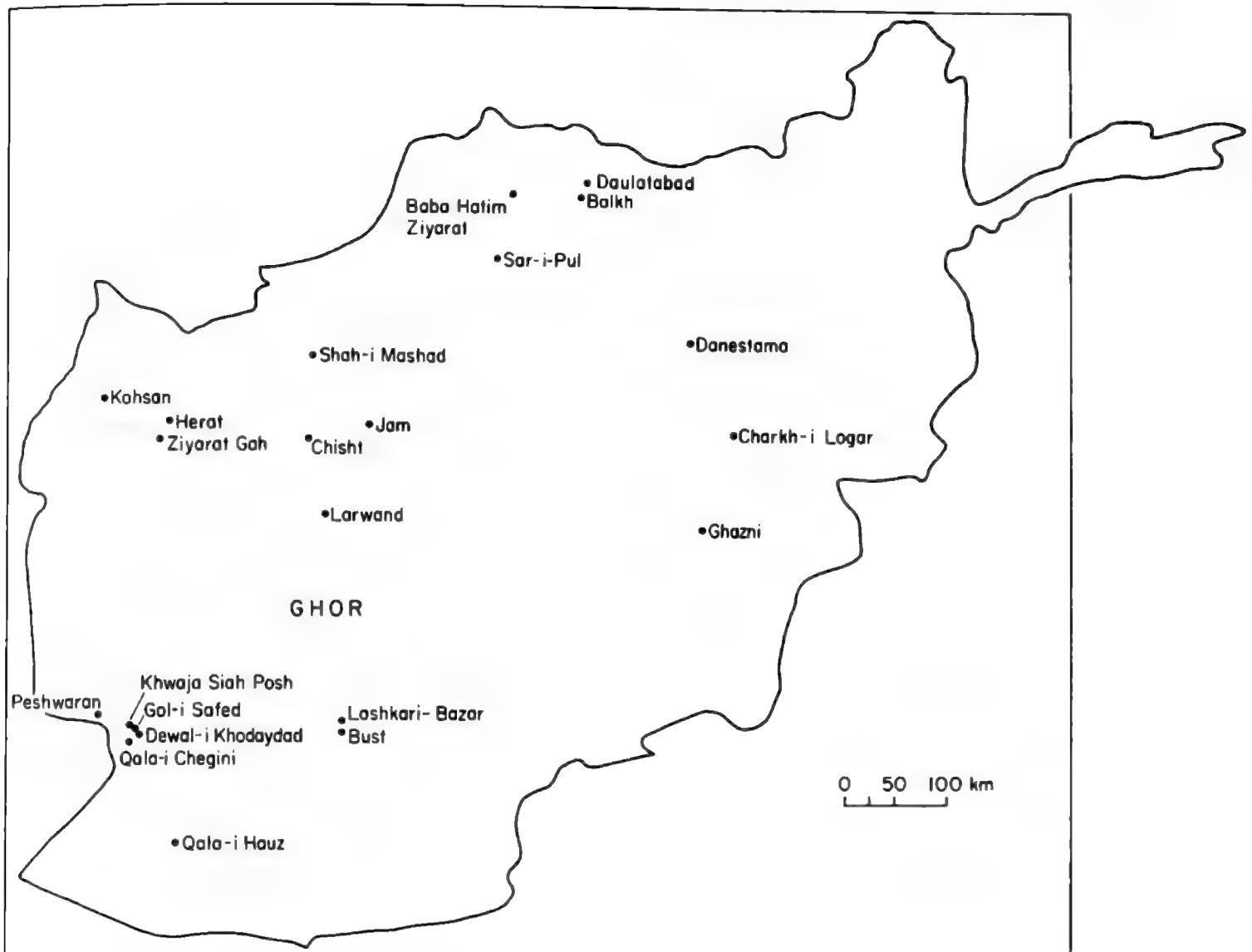
## The Early Muslim Period

### Background

The lonely deserts and mountain ranges as well as populous rural and urban settlements of present-day Afghanistan have always been famous for preserving outstanding monuments of Islamic art: either marking the final phase of an age-old civilization, as for example the shrine of Khwaja Abu Nasr Parsa (Fig. 7.28) near the massive ruins of ancient Balkh, or constituting the beginning of a stylistic sequence important in the artistic evolution of Eastern architecture, for example the minarets of Ghazni (Fig. 6.12). After the Second World War archaeological surveys in Afghanistan revealed remarkable ruins contributing to our knowledge of the development of Islamic art: the Abbasid mosque near Balkh (Figs 6.2–6.4), the tower of Jam (Figs 6.20–6.21), the fortified posts in Ghor (Figs 6.23–6.30), the abandoned city of Gol-i Safed (Fig. 7.8), and the Timurid dome of Kohsan (Figs 7.26–7.27). These discoveries led, among others, to renewed discussion of the naming of art styles after Islamic dynasties, for instance “Seljuk” (Sourdél-Thomine, 1953; Rogers *et al.*, 1974), “Ghorid” (Sourdél-Thomine, 1960; Melikian-Chirvani, 1970) or “Timurid” (Pugachenkova, 1970; Grube, 1974). Mapping mud brick ruins and remains of burnt brick architecture of Islamic strongholds and cities in Afghan Seistan, I came across a wealth of structural and decorative forms inherited from the Parthian, Sasanian (Fig. 7.16), Seljuk (Fig. 7.6), Ghaznavid (Fig. 7.13) and Ghorid art repertoire and heralding the subsequent evolution of Timurid times (Fischer *et al.*, 1974–6:26); these monuments were found on the easternmost border of the Ilkhanid empire and in their majority are to be seen as a branch of the art flourishing in the baked brick architecture under this dynasty (Wilber, 1955; Fischer *et al.*, 1974–6: 257).

Twice ancient Turanian, Iranian and Indian traditions led builders in Afghanistan to creation of new national dynastic styles that in their part influenced artistic developments in neighbouring eastern lands, during the Ghaznavid (Bombaci, 1958; Bombaci, 1966) and Timurid (Grube, 1974) periods. When dealing with architecture and minor arts produced in Afghanistan under the rule of these dynasties we shall first examine the main monuments, of court as well as provincial art, and secondly try to give an idea of their salient features.

In Chapter 6 we have the Abbasid prelude, the spread of Ghaznavid court art across Afghanistan, and the persistence of Seljuk, Khwarazmian and northwest Indian art forms in



**Fig. 6.1:** Islamic sites in Afghanistan.

the Ghorid dominions; Chapter 7 comprises the art of eastern Iranian lands under Mongol rule, during Kart and Ilkhanid rule, the high-watermark of architecture and minor arts in Timurid Afghanistan, and a few later works executed under the Mughals and Safavids, who were great patrons of culture in neighbouring India and Iran respectively.

## Abbasid, Ghaznavid and Ghorid Epochs

During recent archaeological surveys, G. A. Pugachenkova, L. Golombek and A. S. Melikian-Chirvani have found the earliest surviving Muslim religious monument in Afghanistan: an Abbasid mosque in the suburbs of Balkh among the remains of the earliest known Islamic habitation in this pre-Islamic and Islamic city. In both the ground-plan and the wall decoration we have the easternmost examples of a style that originated and flourished in the Near East during the ninth and tenth centuries. A full description is by its discoverer, Lisa Golombek,

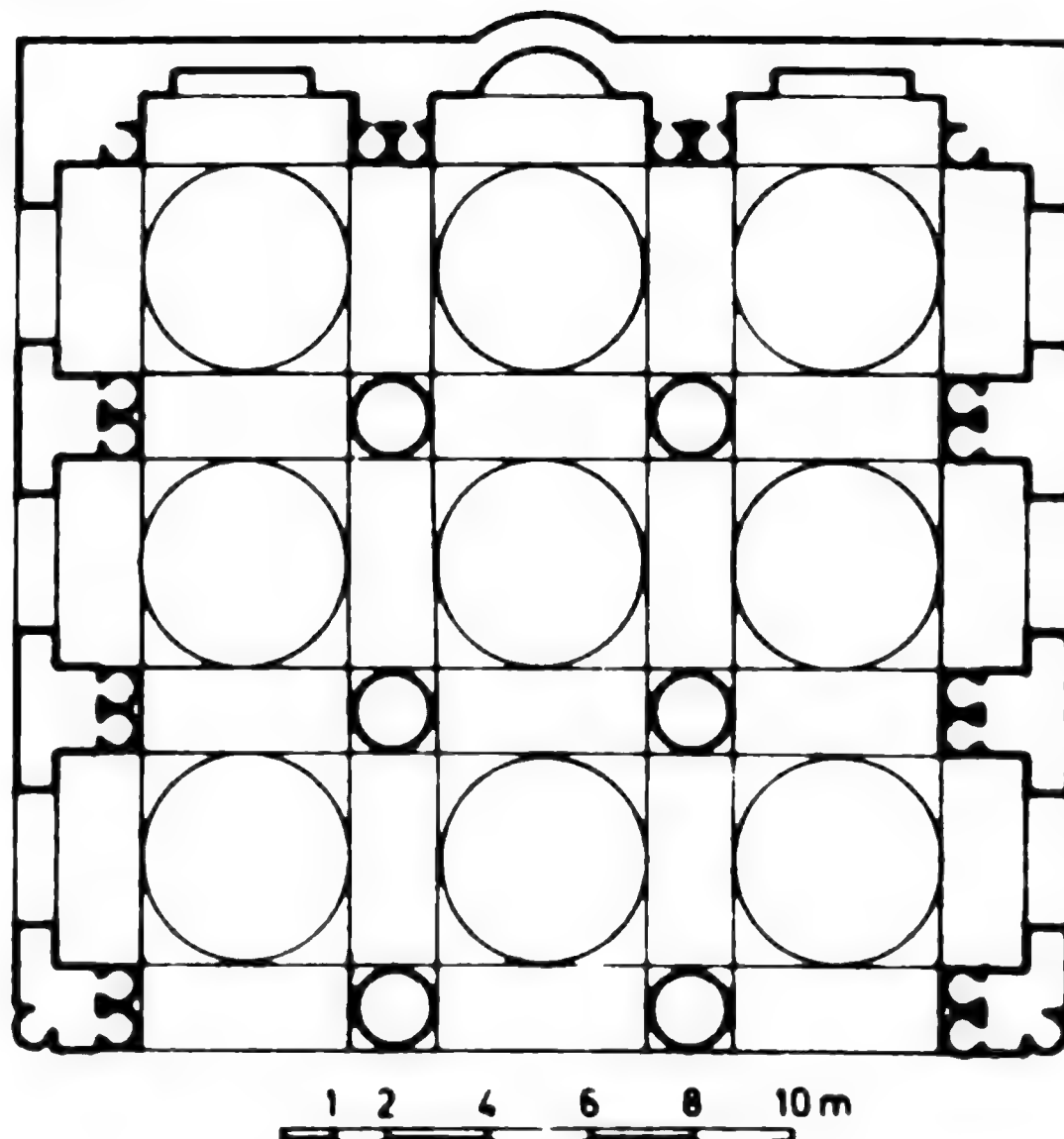


Fig. 6.2: Plan of the Abbasid mosque at Balkh. (After Golombek.)

together with stylistic comparisons with architecture and decorative sculpture of the ninth and tenth centuries and to related monuments at Siraf, Samarra, Nayin, Cairo (Ibn Tulun and Sharif Tabataba) and Qasr al Hayr (Golombek, 1969a).

The Mosque occupies a square area measuring about 20 m on a side (Fig. 6.2). The ruins consist of four large pillars of brick standing in the centre of a square, two fallen pillars on the northeast, three curtain walls, and arches springing from the pillars and the coupled columns which are attached to the walls (Fig. 6.3). In the middle of the southwest wall there is a semi-dome which served as the hood of the *mihrah*, the prayer niche. Deeply carved stucco ornamentation occurs on the capitals, imposts and bases of the columns and on the spandrels and soffits of the arches. The bricks in the masonry of the curtain wall measure  $30 \times 30 \times 6$  cm. The original form of the mosque can easily be reconstructed from these remains. The existing curtain walls mark the southeast, southwest (*qiblah*), and the northwest limits of the building. The four supports (Fig. 6.3) were linked to each other by an arcade. Assuming that the metre-deep debris piled up on the floor of the mosque came from the superstructure, we

may conclude that the roof was composed of brick vaults, presumably a series of domes.

This architectural type seems to have been brought from abroad (Golombek, 1969a: 188). The architects of Balkh reproduced architectural traditions existing in the Near East and in Central Asia from the early ninth century onwards. The columns supported arcades which rose into the walls of the barrel vaults covering the corridors. We have also to consider an oriental tradition of pre-Islamic origin. The so-called "*kushk*" was a small square building of dimensions comparable to those of the Abbasid mosque. Its interior was divided up into nine squares of equal size, each covered by a cupola. It would appear reasonable to seek the model for the architectural design of the Balkh mosque at the same time in Mesopotamia, Egypt and North Africa, where we have a tradition of small cubical buildings divided internally into nine sections; this type, of a mosque of nine domes, was also known to the historian Maqrizi (1364-1442). A small building like the mosque at Balkh belongs to the type of hypostyle architecture on a square base (Grabar, 1973: 116).

In the absence of epigraphic material, only a stylistic analysis of the stucco carvings is available to obtain a relative date for the mosque. A characteristic vocabulary of motifs includes grape leaves, vine-scrolls, palmettes, and fir-cones (Fig. 6.4), grouped so as to fill almost completely the surface occupied by the design, and separated from one another only by narrow, deeply cut lines. As a result, the background against which the relief appears is reduced to a linear pattern of deep shadow, undiminished in its effectiveness even on close viewing. The surface of the design is varied by the drilling of holes and the incising of striated and hatched patterns, rings of pearls, feathering and other devices. This technique of stucco carving is well known from monuments of the ninth to tenth centuries, and the "deep shadow" is best represented in the styles A and B of Samarra, the new capital of the Abbasid Caliphs, founded north of Baghdad in 836 and seat of the government until 890.

Other parallels for the vine ornament at Balkh are to be found in Sasanian stucco from Mesopotamian Kish and early Abbasid monuments of Central Iran at Nayin, Yazd and Buzan. Everywhere we observe geometric grid designs of the soffits, girths and plinths, repetitive friezes of the impost blocks and the palmette frieze of the capitals. The surface is divided into a series of compartments by a network of intersecting bands (Figs 6.3-6.4). The compartments are then filled with vegetal ornament. These forms were quite common in Abbasid stuccos at Qasr al Hayr and in monuments at Siraf, Hira, Samarra, Nayin and in the mosque of Ibn Tulun at Cairo. The strap work at Balkh, like that of Qasr al Hayr, Siraf and Hira, shows patterns derived from grids of touching and intersecting circles, circles inscribed in squares, and star-and-cross arrangements. The arrangement of motifs within the major compartments of the strap work designs are symmetrical, for example in the soffits (Fig. 6.3), or concentric compositions on the girths of the pillars and columns (Fig. 6.4). The style of the ornament may be realistic, in the variety of vine ornaments, or abstract, in the palmette friezes. The predominantly abstract ornament of Samarra styles B and C, Nayin and the mosque of Ibn Tulun, form groups from which we might date the mosque at Balkh to the second half of the ninth century (Golombek, 1969a: 184).

From about A.D. 1000 onwards we can correlate Islamic monuments with dynasties known from the Islamic historians. The designation of "Ghaznavid" art takes its origin from a dynasty founded by the Turk Sebuktegin (977-998), ruling at Ghazni, 145 km southwest of



Fig. 6.3: Balkh, Abbasid mosque, view of interior.

Kabul, from the second half of the tenth century to the middle of the twelfth century (L. Dupree, 1973: 314). His son Mahmud (998–1030), one of the most important rulers of the Middle Ages, created an empire embracing, besides Afghanistan, a great part of Iran and northwest India. He became known as a great patron of the arts, and under his successors architecture and literature flourished, especially under Masud I (1030–1041) and Masud III (1099–1114). Then followed a slow decay of the dynasty. Bahram Shah (1117–1153) ruled under the protection of the Seljuk Sanjar. In 1149 the ruler of Ghor, Ala al-din “Jahan-suz” (i.e. “Destroyer of the World”), burnt Ghazni. The dynasty survived for a time in India but without political or cultural importance.





Fig. 6.4: Balkh, Abbasid mosque, detail of stucco decoration.

## Major Monuments

Monuments in Iranian, Central Asian and Seljuk styles were erected under Ghaznavid rule. Nowadays the most extensive and impressive ruins are preserved not in the city bearing the name of the dynasty, i.e. Ghazni, but on the confluence of the Helmand and Arghandab rivers, to the north of the citadel of Bust.

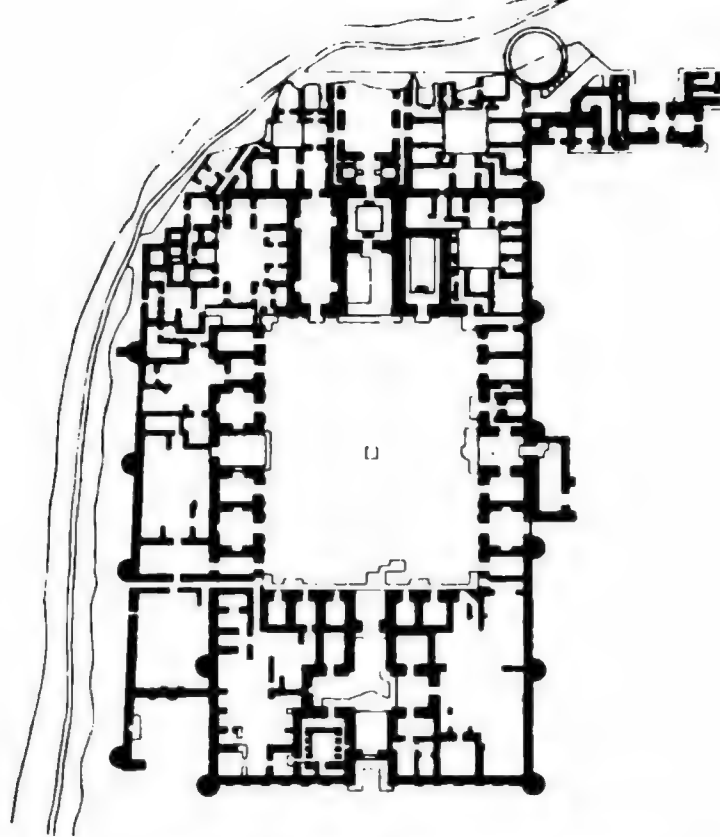


Fig. 6.5: Lashkari Bazar, ground plan of palace. (After Schlumberger.)



Fig. 6.6: Lashkari Bazar, southern palace, wall decoration and remains of vaulting.

## *Lashkari Bazar*

(Schlumberger, 1952b, 1978)

Sultan Mahmud and his nobles built their palaces and villas along the banks of the Helmand river. Most of them were concentrated along a four-mile stretch between the citadel at Bust and the present modern town of Lashkar Ghar. The court was accompanied by a large military escort who lived in barracks and cantonments near the palaces. The three most important palaces were built on a bluff overlooking the Helmand river and of these three the southern palace, built at the bend in the river, is the largest and most elegant. Extending for half a kilometre along the bank, the palace is built around a central court with four *ivans* or arched doorways (Fig. 6.5). Passing through the northern *ivan* one enters a spacious rectangular audience hall once bordered by columns and decorated with frescoes and intricately sculptured stucco. Large panels with epigraphic borders surrounding a welter of sculptured stucco and interlacings of cut brick were found in the debris of the southern *ivan*. Mud-brick structures still preserve architectural and decorative features, for example large vaulted halls and the horseshoe arch (Fig. 6.5). The geometrical decoration includes angular interlacing strapwork, radiating from six, eight, ten or twelve-pointed stars and including polygons of various types. Panels displayed in the Kabul Museum give an idea of the elegant decoration which once faced these barren walls. The excavation revealed also distemper paintings on the walls depicting richly garbed guardsmen, weapons at the ready in brocaded belts, standing against a background of flowers, fruit-laden trees, birds and other animals. The palace guard show Central Asian features in the heads rendered in three-quarter profile (Fig. 6.7). In the centre of the great hall was a rose-petalled water basin fed by a canal running from east to west, indicating that the palace had running water. To the south of the great audience hall was discovered a small mosque elaborately decorated in sculptured stucco with borders of Koranic inscriptions, now reconstructed in the Kabul Museum. To the east of the palace there was a large garden with a central pavilion, and a platform with an octagonal centre may still be seen. A contemporary observer, Baihaqi, mentions gazelles rounded up and herded into this garden, and also the great outings on the plains when the Sultan crossed the river on a canopied barge hung with silks.

Evidence of some remodelling of the southern palace parallels political changes within the empire: new walls are to be observed, and then comes evidence of the great fire when the Ghorid ruler Ala al-Din burned the residence. There are, however, also archaeological traces of a re-occupation and restoration under the Ghorid Sultans. The final destruction came through the armies of the Khwarizm-shah around 1215 or by Chinggis Khan in 1220 (N. H. Dupree, 1971: 237).

## *Ghazni*

The Ghazni plain is full of tombstones and marble graves of Ghaznavid nobles bearing beautiful inscriptions (Flury, 1925). Italian excavators revealed the palace of Masud III (1099–1114) (Fig. 6.8). They were led to associate a ruin field with this ruler by an inscription





Fig. 6.7: Lashkari Bazar, fragment of wall painting from pillar. Kabul Museum.

in his name on a piece of stone used on the keel arch of a *mihrah* (Fig. 6.9), and the proximity of the site to the minaret erected by the same Sultan (Fig. 6.12 background) suggested this connection. Another inscription bearing the date 1112 (Bombaci, 1966: 3) confirmed the connection of the site with the reign of Masud III. Contemporary sources describe the sumptuous palaces, bejewelled with booty from India; nowadays the heart of the complex is a large open rectangular court paved with marble, 50 × 31 m; even the footpath around this courtyard is paved with this precious stone. In the centre of each of the four walls surrounding the court was an *ivan*, an architectural form much favoured by the Ghaznavids. The *ivan* on the north, which included a large imposing vestibule, functioned as a monumental entrance or propylaeum. Opposite, the southern *ivan* contained the throne room. On the east and west there were small rooms, on either side of the central *ivans*, including a pillared mosque in the north west corner. The walls of the court were gorgeously decorated, the upper portions embellished in terracotta and stucco in sculptured geometric patterns which were painted yellow, red and blue. The lower section of the walls preserves a spectacular example of carved marble (Figs 6.9–6.11), containing an inscription 250 m long, not in Arabic as was usual for this period, but in Persian, representing one of the oldest examples of Persian epigraphy. Remains of marble decoration show geometric patterns familiar to us from Islamic art (Fig. 6.10), and further rare examples of animals and men, among others in lively hunting scenes (Fig. 6.11). In the Museums of Ghazni and Kabul are preserved fine specimens of Ghaznavid handicrafts: ewers, stirrups, copper dishes with mythical figures and Kufic inscriptions (Fig. 6.13) and glazed bowls (Fig. 6.14).

In the vicinity of this palace is the minaret of Masud III, mentioned above (Fig. 6.12 background), on a round socle. This tower and the minaret of Bahram Shah (1117–1153) situated nearby on a modern octagonal socle are conceived on the plan of an eight-sided star (Fig. 6.12 foreground). Today only the ground storeys remain, but sketches of the early nineteenth century and older photographs show that the prismatic basements carried cylindrical shafts; according to these records the third storey of Masud's minaret began with a plain circular wall with flat segmental projections above, then carved niches like a kind of negative form of the preceding pattern (Hill and Grabar, 1967: pl. 145). The terracotta decoration of the towers corresponds to these rich and novel architectural inventions.

## Bust

The patrons of Lashkari Bazar or of Ghazni, in either case the early rulers of the Ghaznavid dynasty and their nobles, erected palaces and holy shrines also in the surroundings of Bust, which may have been re-used during the later Ghorid occupation. Here we illustrate a palace ruin at the southern end of the mud brick buildings south of Lashkari Bazar and north of Bust (Fig. 6.15), an especially large structure with a sparsely but expressively decorated facade. Palaces of this type were to become the models for Islamic mud brick architecture in adjoining Seistan (Figs 7.13–7.15). Nearby, we find the ruins of the arch of Bust, which is now generally ascribed to the post-Ghaznavid period (Fig. 6.42). To this Ghorid period we ascribe also certain terracotta panels from Ghazni, to be dealt with later on.





**Fig. 6.8:** Ghazni, palace of Masud III, ground plan. (After Bombaci.)

## *Sar-i Pul*

The north Afghan town of Sar-i Pul contains ten *ziyارات*, some of which are of great archaeological importance. The *ziyarat* of Imam-i Khurd, 'The Lesser Imam', is situated about 1.5 km south east of the centre of the town, and consists of a simple domed chamber about 4.8 metres square. The outer walls were covered in natural mud plaster; the inside, however, has walls with a spectacular decorative inscription in carved stucco. Its rich floral decoration belongs to the best Seljuk tradition (Schimmel, 1970, pl. XIV). Two larger inscriptions in the *mihrab* are written in a highly decorative variety of foliate Kufic script. The text of the inscription informs us that Sar-i Pul corresponds to the medieval town of Anbir.

## *Baba Hatim Ziyarat*

Josephine Powell discovered in Northern Afghanistan the ruins of a splendidly decorated tomb known to the local population as Salar Chalil and described as a Ghaznavid mausoleum (Melikian-Chirvani, 1968). The building rises on a square plan which is transformed into the octagon carrying a squinch dome. This Iranian and Turanian type of construction can be compared with monuments of the tenth to twelfth centuries from Bukhara, Termez, Merv, Uzgend or Sangbast, and the architectural decoration in baked brick links the ruin with well-known buildings, especially of Khurasan art of the eleventh century. Rich stucco ornament again recalls eastern Iranian art. The calligraphy of inscriptions on the walls, recording the memory of the martyrdom of Salar Chalil Sayyid (Fig. 6.16) belongs to the best examples of the foliated Kufic script of the eleventh century.

## *Charkh-i Lohgar*

Another fine specimen of Ghaznavid decorative art survives in a rare example of wood carving; in the upper Lohgar valley, in a mosque named after Shah Muhyi al-Din, in the village of Charkh-i Lohgar, exists a wooden *mihrab* with Koranic inscriptions in Kufic script (Fig. 6.17). This piece of wooden architecture is said to have been brought from an old mosque in the village of Kachari, situated some miles to the north. In this perishable material we observe architectural innovations well known to us from stone, burnt brick or mud brick structures of the age, and can study the transformation of the rectangular *mihrab* by trabeate beams into a semi-circular base for a cupola. The latter is embellished by arabesques (Fig. 6.18). The *mihrab* opens in a cusped horseshoe arch (Fig. 6.17). The *mihrab* with conch, column and side panels represents a fine example of angular interlacing decoration. Further studies of this extraordinary specimen may also enlighten our understanding of the wood-carving in the doors from the tomb of Mahmud of Ghazni (now preserved in the fort at Agra) with their bold composition of post-Samarra pulvin leaves interlacing with a heart-shaped pearled braid. The leaves have spiral tendril tips and include one pair of long-lobed fleurons. These much debated wooden doors are of a period later than Mahmud of Ghazni (Rogers, 1973: 238–244) as also is the marble slab on the tomb of Mahmud in the present city of Ghazni (Flury, 1925: 89).



Fig. 6.9: Ghazni, palace of Masud III, during excavation, with details of marble decoration.





Fig. 6.10: Ghazni, palace of Masud III, fragments of marble decoration.





Fig. 6.11: Ghazni, palace of Masud III, marble slab with hunting scene.





Fig. 6.12: Ghazni, minaret of Bahram Shah, with minaret of Masud III in background.



Fig. 6.13: Ghazni, copper dish. Kabul Museum.



Fig. 6.14: Ghazni, glazed bowl with lustre decoration. Kabul Museum.

## Daulatabad

In Bactria, to the north of Balkh, stands a minaret of pure cylindrical form (Fig. 6.19). This monument of Daulatabad carries a Kufic inscription naming the artist Muhammad Ali and the year 502 A.H. = A.D. 1108/09, and was interpreted as an important work in the Seljuk style (Sourdel-Thomine, 1953: 122). The style of the brick ornaments belongs, after Herzfeld and others (Rogers, 1973: 220), to the so-called *hazar baf* variety. Its essence is a highly pronounced contrast of light and shade produced by all-over patterning of raised bricks in complicated meanders, the angles mostly being right-angles.

## Iran

Outside Afghanistan we find some buildings in eastern Iran that may belong to an extension of Ghaznavid artistic influence, like Sangbast (Bombaci, 1958: 8) or the caravanserai of Ribat Mahi (Hutt, 1970: 205), with its early Iranian vaulting system. According to recent surveys, however, the ornaments of interlacing frame work and other motifs of the early twelfth century still lack definite proof of their connection with Ghaznavid dynastic art (Rogers, 1973: 223).

## Summary of Ghaznavid Art

The art which flourished in Zabulistan under the dynasty of the Ghaznavids collected and transmitted motifs of Sasanid and other origins and was a source for Islamic art in India. The cradle and centre of this culture was Ghazni; before Sebuktegin and his son Mahmud it was an insignificant place, a trading city on one of the old routes between Iran and India. It became suddenly one of the leading centres of Asia when Mahmud made it a cultural centre using wealth acquired during his Indian expeditions. He endowed a *madrasa* with a rich library attracting famous scholars and poets like Firdusi and al-Biruni. In order to gain an overall idea of Ghaznavid art we must use the rich literary sources to interpret the archaeological evidence collected during recent years.

Before Mahmud the historian al-Muqaddasi mentions wooden structures and mosaic art, whilst al-Utbi describes various mosques; there had been great builders before the Ghaznavids and Samanids on the soil of Afghanistan, as Ibn Hauqal reported. Gigantic monuments which have now disappeared once distinguished these vanished cities. The dome of the Naubahar at Balkh, more than a hundred cubits high, built by the Barmakids, was greater than the very palace of Mansur at Baghdad. As for Ghazni, there can be no doubt of its splendour in the early eleventh century. Here the poets confirm the historians.

How many a palace did great Mahmud raise,  
At whose tall towers the Moon did stand at gaze,  
Whereof one brick remaineth not on place.





Fig. 6.15: Bust, facade of mud brick palace.





Fig. 6.16: Baba Hatim Ziyarat, facade of monument to the memory of Salar Chalil.



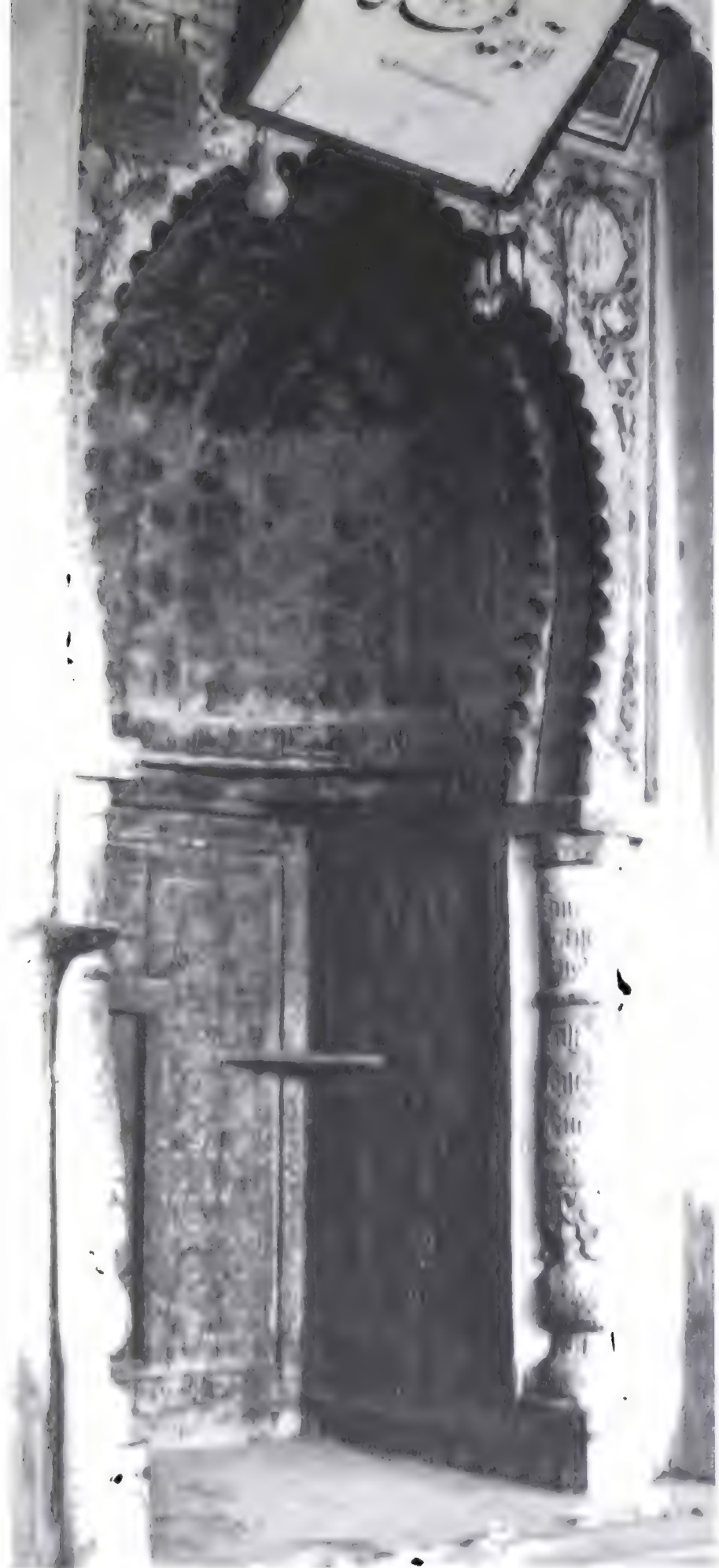


Fig. 6.17: Charkh i Lohgar, wooden mihrab in local mosque.



Fig. 6.18: Charkh-i Tohgari, zone of transition in mihrab.





Fig. 6.19: Daulatabad, minaret.

Of some of Masud's buildings more specific accounts have survived. When he came to the throne he already had at his disposal a series of royal residences: in addition to his father's great estate, the Bagh-i Mahmud (Mahmud's Garden), and his old palace, Gawshak-i Kuhan-i Mahmud, there were the garden of the Hundred Thousand, the Victory Garden, the State Palace and the White Palace, but all these and more besides did not suffice. And so there came into being the Gawshak-i Masudei, dedicated with a fabulous festival. The main royal buildings formed a symmetrical group, in the centre the audience hall, on the right the summer palace, on the left the winter palace which was domed. Nowadays we may visualize in these architectural groups great *ivans* such as those cleared by archaeologists at Ghazni (Fig. 6.8) and Lashkari Bazar (Fig. 6.5). The latter palace has also traces of wall paintings such as those vividly described by contemporaries in the great palace paintings of Mahmud of Ghazni. We know that his victorious armies and his elephants were depicted and in one hall were portraits of Mahmud himself. In other apartments were the combats of the Sasanian kings.

Historical and literary texts attest the building activity of Mahmud, Masud I and Masud III; to a lesser degree we know also of the works sponsored by Ibrahim and Bahram Shah. Ghaznavid architecture tends to grandeur and opulence, a contrast to the building material of mud brick—a tendency, however, visible in several Oriental cultures. One of the great inventions of Ghaznavid art consists of the grouping of *ivans*. The dome and the *ivan* are the two major spatial forms which give the buildings of Persia their impressive monumental character. The word *ivan* can be used for an enclosed hall with flat roof, but in Islamic architecture it means always a space, whether portal or hall, which is surrounded on three sides, open to the fourth side and covered by a barrel vault. The *ivan* opening on a court can be followed by a square domed room, which in turn opened into a series of porticoed courts. Archaeological work at Lashkari Bazar and Ghazni showed that compositions of four *ivans* on the axes of a courtyard were a prominent feature in Ghaznavid architecture before four-*ivan* compositions were used in Khurasan as ground plans for mosques, *madrasas* and caravanserais.

Another invention or adaption of earlier Oriental forms, of far reaching consequence for later eastern architecture and decoration, was the use of the horseshoe arch (Figs 6.6, 7.4, 7.13, 7.16). The round horseshoe arch may have been derived from Persia on the strength of details of construction observed at Firuzabad, built by Ardashir in the third century A.D. Here the arch was set back at the springing so as to provide a support for the centring. Some believe that the motif came from India, where a number of rock-cut caves or Chaitya halls have an entrance arch of this form. In the history of Muslim architecture the horseshoe arch is first met with in the great mosque at Damascus, where the arches of the transept and the lower arches of the arcades are slightly larger than a semi-circle. In Ghaznavid art, Near Eastern and Indian origins may have been combined; they were enriched by decorated pointed forms and led to a regional development in Seistan (Fig. 7.16).

## Palaces

These provided the most imposing architecture. Four-*ivan* compositions ultimately go back to Parthian prototypes at Assur, Sasanian structures at Ctesiphon, and Abbasid imperial

buildings at Samarra and Ukhaidir. We learn from Farrukhi that Mahmud's brother Yusuf resided at Balkh in a pavilion of four columns, from where the view was directed through four gates into four regions of the world.

## Gardens

Gardens surrounded all palaces, and were also conceived alone with temporary structures of tents and pavilions. Mahmud's Bagh-i Nau at Balkh was embellished by a small lake with a marble surround and at Ghazni water pipes with silver mouthpieces spouted fresh water on the parks, in a desert climate.

## Mosques

Mosques had, after al-Utbi and especially according to his description of the mosque "The Bride of Heaven", perfect proportions. In the construction trees from India were used; the walls were polished and sparkled "like a maiden's face". One special room was reserved for the Sultan. Whilst no remains have been discovered of this magnificent building at Ghazni, we know the small prayer room from Lashkari Bazar serving as a palace mosque, situated in an angle of the huge enclosure near the palace entrance. A central room in front of the *mihrab* had four pilasters that may have carried a dome.

## Minarets

Minarets in baked brick (Fig. 6.12) marked the sites of mud brick mosques. It is still disputed whether they may have functioned at the same time as victory towers, since mosques have been founded as symbols of both fame and faith. During Ghaznavid (and Ghorid) times the knowledge of Hindu towers in the conquered parts of northern India may have inspired Muslim builders to copy *jayastambhas* or *kirtistambhas*.

## Decoration

Decoration is best preserved in the Ghazni baked brick minarets (Fig. 6.12), where the tendency to encrustation has been sustained and realized. Its very form, with the salient angles, is decorative, and the division of each of the great facets into a succession of panels, decisively separated by repeated horizontal bands, provides a handsome scheme of ornaments in the patterning of the brickwork. Each successive panel is larger by 50% than the one below, so that they increase in size as they recede upwards from the spectator. Each unit is filled with a different all-over geometrical design.

Ghaznavid sculptors evolved a noble decorative repertoire. At the beginning of the dynasty, the carvers were evidently still modest in their attempts, judging from the tomb of Sebuktegin, for here the ornament is limited to bands of Kufic inscription with the simplest possible interstitial motifs. The technique of cutting in two levels only, with very low relief and firm regular outlines, whereby the background is removed from around the pattern



leaving it slightly raised but flat, had long been practised in wood. Essentially the same technique was continued at least through the twelfth century, but it was progressively enriched in order to execute the increasingly complex designs organized in multiple systems that implied superimposed levels (Fig. 6.10).

Wood and stone alike are carved into delicate foliate interlacements in which many old forms are retained, but enriched and supplemented with new elaborations; thus in the border of each panel on the doors of Mahmud's tomb the undulating stem with foliation on alternate sides carries leaves in the form of a halberd with a recurvant tip. The arches are characteristically trefoil, the form long used in this region for Buddhist art, and a cusped interior outline likewise has an Indian flavour (Fig. 6.9).

### *Painting*

Painting was inspired by Abbasid as well as by Central Asiatic Turkic prototypes. Literary sources tell of the lavishly embellished private quarters of Masud I at Herat. The remains of wall paintings from Lashkari Bazar prove once more the mediating role of Ghaznavid art between ancient Oriental or Central Asiatic themes and later Islamic developments. The walls of the *ivan* hall must have been decorated by a continuous frieze of male figures in isocephalia. From the surviving fragments of 44 figures, distributed on the walls between the door openings rhythmically in the relation 14:8:8:14, there would have been a procession of about 60 persons, orientated towards the throne of the ruler; and rendered in frontal view, but with the feet in profile. The fragment of a head on a round pillar (Fig. 6.7) suggests that the faces were in three-quarter profile before a nimbus. The facial expression suggests a Turkic origin for the palace guard—precursors of which may be sought among the "Tocharian princes" on the walls of buildings in the Turfan oasis or in the processions of Achaemenid reliefs. If we possessed Ghaznavid miniatures, we could check the information supplied by a Ghaznavid treatise, *Bayan alt-Adyan*, that among the treasures of the Ghazni library there was a copy of the *Arzang*, the legendary book of Mani, with illustrations, and also whether the influence of Manichaean book art was felt in Ghaznavid monumental and miniature painting.

### *Sculpture*

Best preserved on marble slabs, this shows palace life, dancers, animal fights and hunting scenes. (Fig. 6.11). The persons depicted wear Central Asian costumes and have Mongol visages. The figures are clumsy, their movements rather awkward; the relief is flat and scarcely modelled. There is no archaeological evidence of bronze sculpture such as the four bronze warriors around the throne of Masud I guarding the crown, described by Baihaqi.

### *Pottery*

Samanid and Ghaznavid ceramic styles were recognized in the slip-painted wares of Lashkari Bazar (Gardin, 1963: 139) and of Ghazni. Kilns and kiln-wasters at Lashkari Bazar prove the

local manufacture of the red or buff sandy fine-grained earthenware, covered with white, cream, manganese-purple, brown or even, rarely, tomato-red slip. In the early period the main decorative pattern was Kufic script. Palmettes and floral motifs, rosettes, scrolls and three-petalled flowers are frequent, while geometric patterns and cross-hatchings are rare. Some slip-painted vessels are decorated with dots outlining the main decorative themes, such as birds or other animals. The 'House of Lustre-ware' at Ghazni (Scerrato, 1959: 49) supplied rare examples of white-bodied ware with lustre decoration (Fig. 6.14). Lustre is formed by painting on the glazed and otherwise finished pottery a pigment derived from metallic salts, which, when fired at a low temperature in a special kind of kiln, deposits a thin film of metal on the glaze. Slip-painted and lustre ceramics dateable to the Ghaznavid period were surface finds in neighbouring Seistan (Fischer *et al.*, 1974-6: 20).

## The Ghorids

The Ghorids were an eastern Iranian dynasty which flourished as an independent power in the twelfth and early thirteenth century, based on the mountainous region of Ghor, the hills and valleys of the classical Paropamisadae, now central Afghanistan. The family name of the Ghorid Sultans was Shansab, and at the time of the inflorescence attempts were made to attach their genealogy to the ancient Iranian epic past. Within the empire of Sultan Mahmud of Ghazni, Ghor remained an unabsorbed enclave, and during his reign at least three expeditions were sent by him into Ghor. In 1011, the Shansabani chief Muhammad b. Suri was captured in his stronghold of Ahangaran. He was deposed and his pro-Ghaznavid son, Abu Ali, set up as the Sultan's vassal. Abu Ali is said to have erected mosques and *madrasas* for the newly introduced Islam.

With the accession of Izz al-Din Husayn, Ghor became a buffer state between the truncated Ghaznavid empire and the empire of the powerful Seljuks, then with the relative decline of the Ghaznavids after Ibrahim's death in 1099, Ghor was drawn into the Seljuk sphere of influence. After Ala al-Din, the 'Destroyer of the World', however, the Ghorids became an imperial power by the middle of the twelfth century. Under Shams al-Din (later Ghiyath al-Din) Muhammad of Ghor (1153-1203) and his brother Shihab al-Din (later Mu'izz al-Din) Muhammad of Ghazni (1173-1206) the Ghorid empire reached its apogee. These two brothers maintained a partnership and amity rare for their age. Broadly speaking, the first was concerned with expansion westwards and the checking of the Khwarizm-shahs' ambitions in Khurasan, whilst the second attacked India. These Indian expeditions had manifold cultural consequences: northwest Indian art styles led to the erection of the unique mosque of Larwand (Fig. 6.32) and Afghan conquerors raised the Indo-Islamic master-work of the Qutb al-Minar at Delhi (see below, p. 366). Ghorid cultural influence extended also towards the west where in Seistan the Saffarid Amir, Taj al-Din Harb, acknowledged Ghorid suzerainty, but within a decade of Muizz al-Din's death the Ghorid empire fell apart, passing for a brief while into the hands of the Khwarizm-shahs before coming under Mongol rule.

In the ruined sites of the Ghorat and in ruins of Ghorid age from Seistan towards north Afghanistan, from Herat to eastern Afghanistan, we find *sgraffiato* and carved wares of pottery

(Fehérvári, 1973: 61; Fischer *et al.*, 1974-6). The *sgraffiato* wares with incised lines of geometric or free patterns on green, brown or yellow splash, bridge in the Islamic period, the gap between the early Iranian slip-painted wares (see p. 329) on the one hand and the "Fine Seljuk" wares on the other. Archaeological evidence is present at numerous Iranian sites and from the Ghorid levels at Bamiyan and Lashkari Bazar/Bust (Gardin, 1963: 138; 1957b).

Islamic historical accounts inform us of a mighty capital of the Ghorid rulers; after the discovery of the minaret of Jam (Fig. 6.20) this centre, named Firuzkuh was sought near Jam (Moline, 1975), but also other identifications were brought forward (Leshnik, 1968) and the most recent work has been the archaeological field survey carried out by Werner Herberg (1976) and his colleagues in the mountains of Ghor. Before deciding, however, the problem of the site of Firuzkuh, we may examine numerous architectural and sculptural remains, documenting a "Ghorid art" (Sourdél-Thomine, 1960). We start our survey in the surroundings of Jam.

In the heart of the Ghorat mountains the Hari-Rud flows from the east. The smaller Jam-Rud, running from the south, passes the small village of Jam; northwest of the confluence with the Hari-Rud is situated the brick tower of Jam (Fig. 6.20). To the north of this tower, the Hari-Rud receives a small river, the Bedan-Rud, from the direction of Ahangaran.

The minaret stands 65 m high with a basal diameter of about 9 m; it is constructed of fired brick. Above the octagonal base rises the first cylindrical tier. On the first balcony projecting wooden beams are still to be seen, whilst the fragile brickwork has fallen away. The whole tower consists of four slightly tapering cylinders narrowing inwards at the stages marked by the corbels of balconies now gone. The entire exterior of the shaft of the minaret is decorated with carved brick relief ornamentation laid over the plain structural bricks (Fig. 6.21). The most intricately decorated tier is the first cylinder, its surface being divided into eight vertical segments. Each vertical zone is subdivided into smaller areas by a narrow band of inscription which moves in an unbroken line around each panel and from section to section. The text is the entire Sura of Maryam, the nineteenth chapter of the Quran. Just below the corbels of the first balcony are three floral bands (Fig. 6.21, upper portion) with the fourth row down comprised of a trefoil or stylized tulip motif. Between the first and second balconies is an undecorated area to the height of the second level doorway. The lower of the two Kufic inscriptions on this tier rests above a band composed of a network of geometric designs. Above the second balcony is another plain area rising to the height of the third doorway. On this level there is another band of Kufic inscription.

The walls are composed of interlocked layers of plain fired bricks about 20 cm square and 5 cm thick. Inside the base and the first cylindrical tier there is a double spiral staircase. These staircases, one over the other, terminate at the top of the central core.

Inscriptions on the first cylinder from the bottom refer to Ghiyath al-Din Muhammad ibn Sam, who ruled Firuzkuh from 1153 to 1203. The style of the Kufic is traditional (Moline, 1975).

The first cylinder of the minaret utilizes "panel architecture" (Moline, 1975). This technique is also seen in early Islamic art, where structural sections are emphasized by the decoration. The three-dimensional ornamental brickwork within the wall panels creates a pattern of light and shade. Decorative brickwork technique of the same kind will be found in



**Fig. 6.20:** Jam, the minaret.

Ghorid buildings of Herat (Fig. 6.34) and Chisht (Fig. 6.31). Among the motifs used, bands of pearls (Fig. 6.21) are known from the Sasanid times, and are also found on the Tower of Bahram Shah, at Ghazni (Fig. 6.12).

Moline (1975) mentions archaeological remains in the surroundings of Jam described by Le Berre, Bruno, Gnoli, Leshnik and Kieffer. Herberg (personal communication) has permitted me to report on his recent discoveries of architectural and sculptural remains, partly edited by him and Rapp, partly unpublished. On the hill of Kush-Kak, to the west of the Jam-Rud, halfway between the village of Jam and the tower on the confluence, he discovered further tombstones with Hebrew inscriptions indicating the cemetery of a large Jewish community in this area of Ghor from 1149 to 1215 (Herberg, 1976). To the south of the Hari-



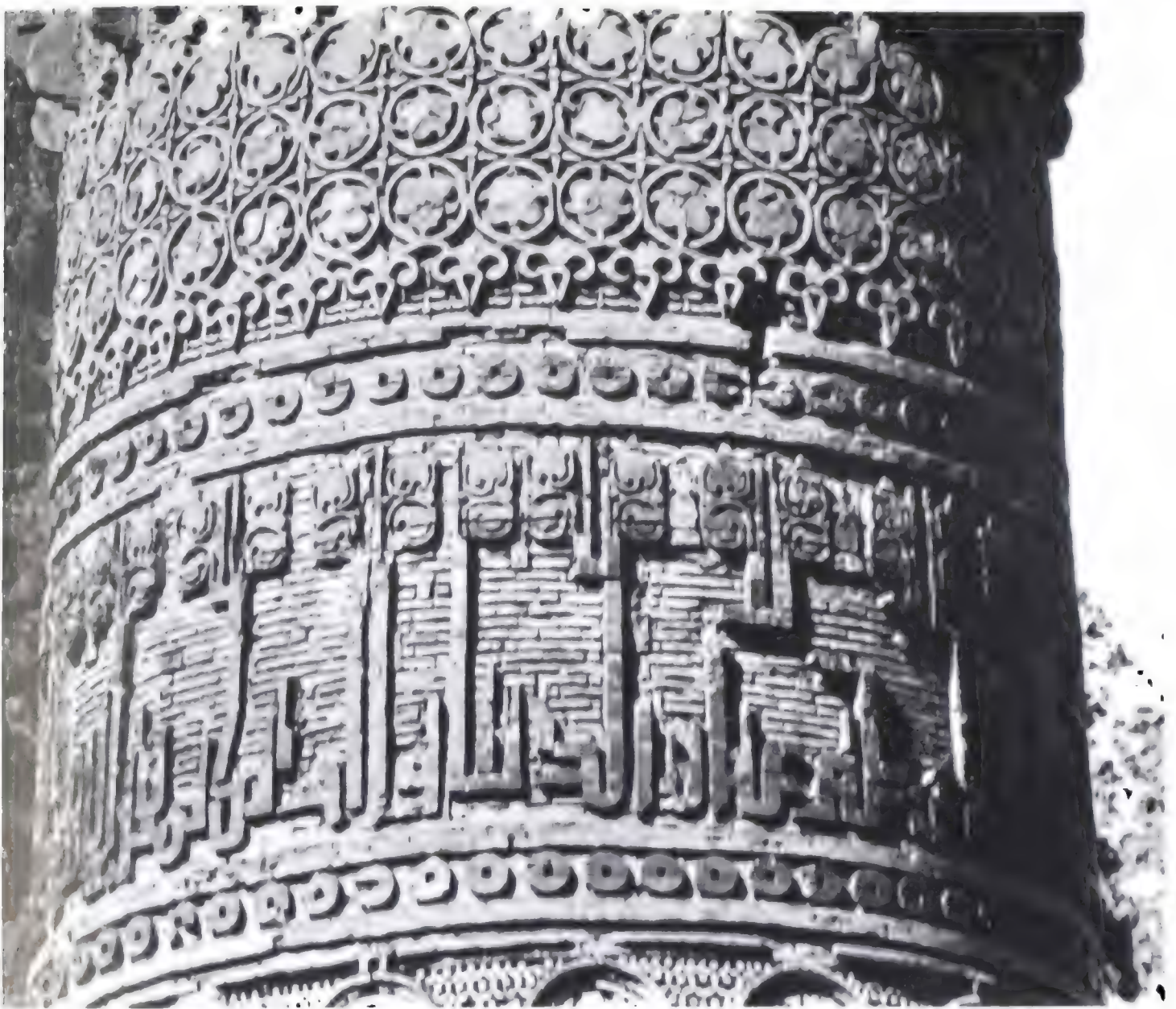


Fig. 6.21: Jam, detail of decoration of the minaret.

And he mapped mud brick watch towers (Fig. 6.22) constituting a fortification line. To the north of this river he studied a fortress opposite the tower of Jam. The natural rock was connected by inner and outer stone walls that are preserved up to a length of 200 m. On the summit he found a rock-hewn and stone-built water-reservoir. In and around these ruins he collected sherds of ‘*sgraffiato-ware*’; to the west of this fortress, in a valley of the Hari-Rud, immediately north of the tower, some ruins were still visible a few years ago, but they have been recently cleared away; local tradition called them a ‘bazar’. Finally, in the angle between the Hari-Rud and the Bedan-Rud there are to be seen remains of a smaller fortress, and on the bank of the Bedan river was found an Islamic rock inscription. The fort was probably destined to protect the valley of the Bedan-Rud, that historically important route towards Ahangaran, a place mentioned by Islamic writers, preserving both pre-Islamic and Islamic ruins and at present a well-populated village.





**Fig. 6.22:** Jam, mud brick fortification.



Fig. 6.23: Aana, lines of square and round towers.

We may now survey the other main archaeological sites of the Ghorid period. In the north is Ahangaran, with an old fortress in the middle of a valley on an earthen mound some 60 m from the left bank of the Hari-Rud (Kohzad, 1953: 59). From a distance, the earthen ramparts, blocks of stone and fragments of wall are still impressive. The centre of the castle was a tower and the outer walls were reinforced by towers also. It was because of such forts that Sultan Mahmud could not force a passage in spite of his great army. Isolated towers and smaller castles connected Ahangaran in a line of fortifications among which fortresses like Guzarpam and Chehel Gazari stand foremost. South of Jam is the valley of Shaharak (Fischer, 1969: 376) with numerous tepes and mud brick ruins marking pre-Islamic and Islamic settlements. Pending further archaeological field surveys, we prefer to leave open the question of whether the site of the Ghorid capital of Firuzkuh is to be located at Taywara or any other stronghold, rather than in the vicinity of the tower of Jam. Powell has photographed ruins in this area between Hari-Rud and Rud-i Ghor, predominantly fortified sites, sometimes of urban and village-like character. We know that in the Ghorid period the land route through these ranges was protected by watch towers and castles of both military function and artistic importance. To both sides of the valley of Aana, for example, lines of square or round mud brick towers dominate the crests of gently rising hills (Fig. 6.23). A cylindrical tower at Male Alau rises on a stone basement (Fig. 6.24); the military architecture is embellished on the upper part of the mud and mud-brick walls by simple but expressive geometric patterns (Fig. 6.25). The mud brick fortress of Khissar is perched upon steep rocks (Fig. 6.26) in a dominant position blockading a pass on one of the mediaeval trade routes through the Ghorat (Fig. 6.27). The present village of Yahan is situated in a valley around which are rising terraces studded with mud brick ruins (Fig. 6.28) among which excavation might reveal dwelling





Fig. 6.24: Male Alau, mud brick tower on stone base.





v.25: Male Alau, geometrical decoration of tower.





Fig. 6.26: Khissar, fortification in the pass.

houses or even residential areas. Again, towers or pisé or mud brick are placed upon small hillocks to protect an old urban site (Fig. 6.29) and connect with a line of watch towers in the vicinity (Fig. 6.30). A study of these fortifications confirms the historical accounts of the Ghaznavid campaigns in the early eleventh century and the information by the geographer Yaqut that Ghor had no towns of note, but only agricultural settlements and—most typical of the landscape—many fortified places and towers (*qasr*, *qala*, *hisar*, *kushk*) where the freedom-loving people could defend themselves (Bosworth, 1961: 118). These strongholds were also favoured places for imprisoning political prisoners. The commanding positions of the fortresses (Figs 6.26, 6.29) reflect the fragmentation of political power in Ghor during the early mediaeval period, with no obvious centre from which the whole mountain region could be controlled by a single ruler.



Fig. 6.27: Khissar, fortress seen from above.

The western frontier of Ghor is marked by the village of Chisht (Fig. 6.31), situated in a lovely valley with large trees and a small stream. In the vicinity of contemporary buildings we find remains of a mosque and a school (*madrasa*) built by Sultan Ghiyath al-Din ibn Sam, according to the traces of an inscription on the mosque (Maricq and Wiet, 1959: 69). The structural technique of the squinch dome as well as the delicacy of the wall decoration are typical of Ghorid art.

Near the southern frontier of Ghor we find the ruin of Larwand that throws further light on mediaeval connections between the heart of Afghanistan and northwestern India. According to recent information (Scarcia and Taddei, 1973: 96), the name of the locality is Ziyarat-i Malikan and refers to a pilgrimage thought to have been customary among Ghorid sovereigns; it is situated about half-way along the track running from Larwand to Parjuman.





**Fig. 6.28:** Yahan, modern village surrounded by mud brick ruins.



Fig. 6.29: Yaban, line of towers of ancient fortification.





Fig. 6.28: Yahan, modern village surrounded by mud brick ruins.



Fig. 6.29: Yaban, line of towers of ancient fortification





Fig. 6.30: Yahan, tower in line of fortifications.

The building is fashioned in blocks of dark stone and square in plan (Fig. 6.32). Each side measures 2.5 m in length on the inside and the height of the walls is 3 m. The front is designed as an arched screen placed in front of an inner core, set back about 40 cm, and structurally and stylistically independent, although forming a unified whole, as is clear from the well-jointed blocks connecting the two parts. At the bottom of the screen there is a plinth, the lower section of which consists of a fillet (or foundation rebate?) and the upper of a small moulding made up of a course of hanging palmettes; the plinth is surmounted by a projecting fillet that ends abruptly at a point corresponding to the arch. From the plinth there rise four pilasters reproducing "columns" with an octagonal shaft and capital consisting of four brackets with volutes. The pilaster bases are of two different types and are not arranged symmetrically, for the two on the left are "vase-shaped", while the two on the right are octagonal, each of the faces being decorated with a characteristic elongated triangle motif with the apex uppermost. The four pilasters support the upper part of the screen, which is divided into three panels by four large ribs corresponding to the pilasters. The central panel is of larger size and filled by a slightly pointed horseshoe arch which in its lower, narrowing section is absolutely straight. The screen is surmounted by an S-shaped eave, the upper surface of which is ribbed. The doorway is flanked by two elaborate pilasters: low down the shafts are square but with rebated edges, then they become octagonal and finally round at the top, where they are decorated with the Indian Kirtimukha symbol. The jambs and lintel are diversified by a wavy scroll. The panels above the door are decorated by, upwards: 1) a lozenge motif inside small rectangular panels alternating with dentils; 2) small trefoil arches alternating with small columns with large capitals; 3) a motif of intertwined arches; (4) a moulding with a series of hanging palmettes; (5) a band of lozenges inside panels.

In the narrow and dark interior are remains of a dome construction (Fischer, 1974: pl. 174). At each of the four corners of the room, a kind of beam fashioned in stone blocks, equal in length to roughly one third of each side, transforms a square into an octagon, which was probably the base of the cupola.

Taddei has convincingly interpreted the architecture and decoration as of northwest Indian origin (Scarcia and Taddei, 1973: 100). According to historical accounts of the Ghorid period we may surmise that among slaves, prisoners and various rarities despatched from the Indian campaigns with the rich booty to Ghazni and the Ghorat were also craftsmen skilled in the art of building and sculpture according to the canons of Hindu art. During Ghorid times India was no longer simply a land for raiding, but had become a settled conquest. Temples were destroyed at the conquest, but their parts were used in the building of mosques and their decorations adapted to the requirements of the new faith. From Ghorid expeditions to northwest India, parts of Hindu or Jaina temples could have been transported to the centre of the Ghorat and re-used in buildings for the Islamic religion on a very small scale; or master builders and masons from India may have been brought to Afghanistan, converted to Islam and constructed tombs and mosques for the Muhammadan rulers in Indian style. In any case, the ruin of Larwand gives a vivid picture of east-west cultural interrelations under Ghorid rule.

At the same time the traditional links with Iran were maintained. Situated to the west of the Ghorat, Herat looks back to pre-Islamic history and can boast of possessing a masterpiece of Ghorid art nowadays in the midst of a shrine dominated by Timurid features, to which we





Fig. 6.31: Chisht, modern settlement with Ghorid domed ruins.



Fig. 6.32: Larwand, facade and entrance of mosque.





**Fig. 6.33:** Herat, “Great Friday” mosque, courtyard with main Timurid *ivan*, and bronze cauldron of A.D. 1375, in foreground.



Fig. 6.34: Herat, "Great Friday" mosque, remains of Ghoriid architecture.



shall return in Chapter 7. Here we deal with the Ghorid parts of the well known "great Friday" Mosque (Fig. 6.33) (Hill and Grabar, 1967: 56), only recently brought to our knowledge (Melikian-Chirvani, 1970). Three parts of the mosque are of pre-Timurid date. The first is the low vaulting leading right and left from the western *ivan*; it has retained a brick pattern of a distinctly twelfth century appearance. Further, on the left-hand side of the eastern facade a large portal was decorated in late Timurid style until 1964, when an earlier stucco decoration with a large Kufic inscription was uncovered (Fig. 6.34). Finally, an older part with an inscription was still to be seen about 40 years ago at the top of the walls enclosing the so-called tomb of Ghiyath al-Din.

To the northeast of the ancient capital of Herat we find the ruins of a *madrasa* in a lonely position and reflecting the best tradition of Ghorid court art. We owe the recent discovery to Casimir and Glatzer (1971), upon whose report the following is based, with additional notes by Glatzer. The ruins stand on the left bank of the Murghab, about 2 km downriver from its confluence with the Kucha. The inhabitants of the region call both the ruin and the river valley between the mouth of the Kucha and the ruin "Shah-i Mashad". The building is constructed of baked bricks  $25 \times 25 \times 5$  cm. The surfaces are simple brick walls, with more or less complicated brick work mosaics set into the plaster and plaster-and-stucco areas. The groundplan is almost square, 44.20 m north-south axis and 44.0 m east-west. The building is oriented at  $269^\circ$  (Fig. 6.35). Today parts of the north and south tracts remain, with the eastern part of the south facade (Fig. 6.36), the main *ivan* of the entrance, the remnants of two originally domed rooms and a small fragment on the northeast. On the south side there is a typical niche-facade with a rhythmical sequence of five pointed arches which are of almost equal height (except for the *ivan*), but of different widths. In the original dome-chambers are squinch constructions. The zone of transition (Fig. 6.37) in the larger room consists of a rhythmic series of corner squinches and niches—this special decorative system is used contemporarily in mud brick *ivan*-courtyard-houses of Seistan (Fischer *et al.*, 1974: pl. 225). There are at Shah-i Mashad fifteen bands of inscriptions, of which ten are Kufic and five Nashki. The architecture of the niches, the decoration and the inscriptions, as for example the Kufic of the Sura 48, form a perfect artistic unity (Fig. 6.38). For the most part we find the usual Iranian keel-arch (Fig. 6.36). In the north tract, however, a horseshoe arch was noticed, indicating a relationship with Ghaznavid art, especially in connection with the beginning of the cusped arch. The Nashki inscriptions have been compared with an inscription at the undated mosque at Peshwaran in Seistan (see Fig. 7.4) and with the above-mentioned Ghorid inscription in the mausoleum of Ghiyath al-Din in the Friday Mosque of Herat. Structure, inscriptions and decoration point to the Ghorid period. The ornamentation is especially rich on the southern facade. The arrangement of the brick and terracotta right-angled ornaments is characteristic, with square fields often framed by special decorative friezes. The discoverers compared the architectural and ornamental style with structures of the twelfth century in west Khurasan, Central Asia, Ghazni and Seistan, and suggested a Ghorid foundation and a designation as Khurasanic/Late Seljuk. The presence of *sgraffiato* pottery on the site corroborates their stylistic dating.

To the north and northeast of the Ghorat we find archaeological sites in valleys of the Hindu Kush and on the slopes of the Kuh-i Baba range. In the Bamiyan valley, for example, is a

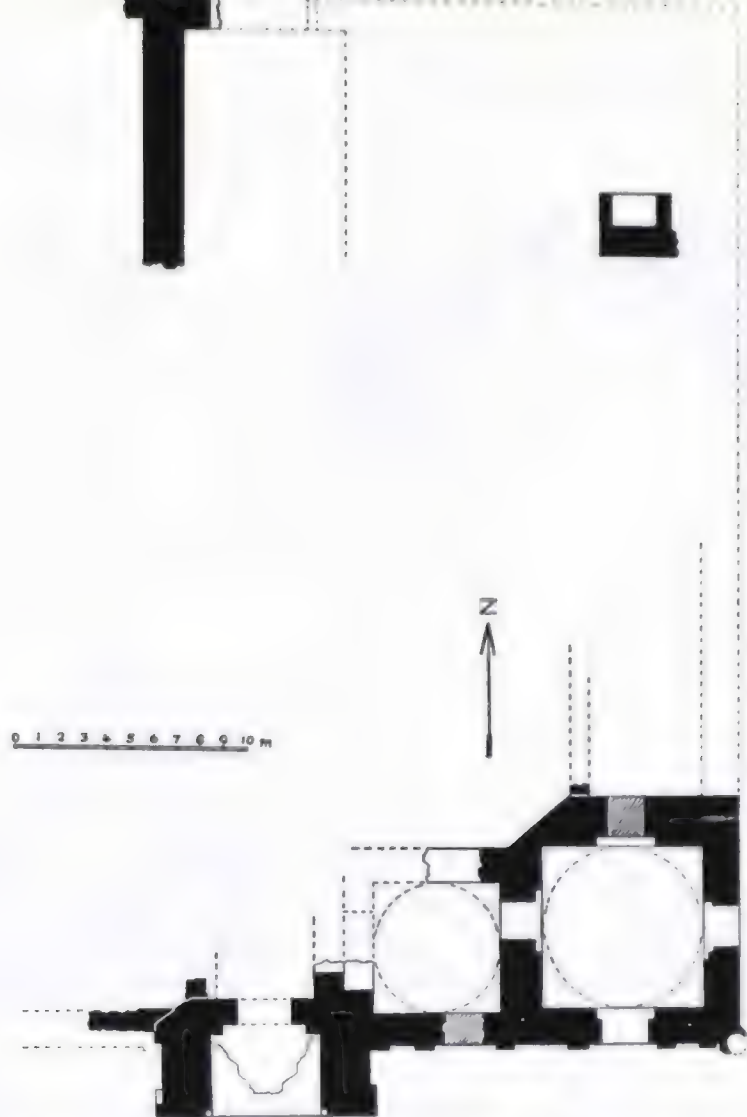


Fig. 6.35: Shahr-i Mashad, ground plan. (After Casimir and Glatzer.)



Fig. 6.36: Shahr-i Mashad, view from the north.



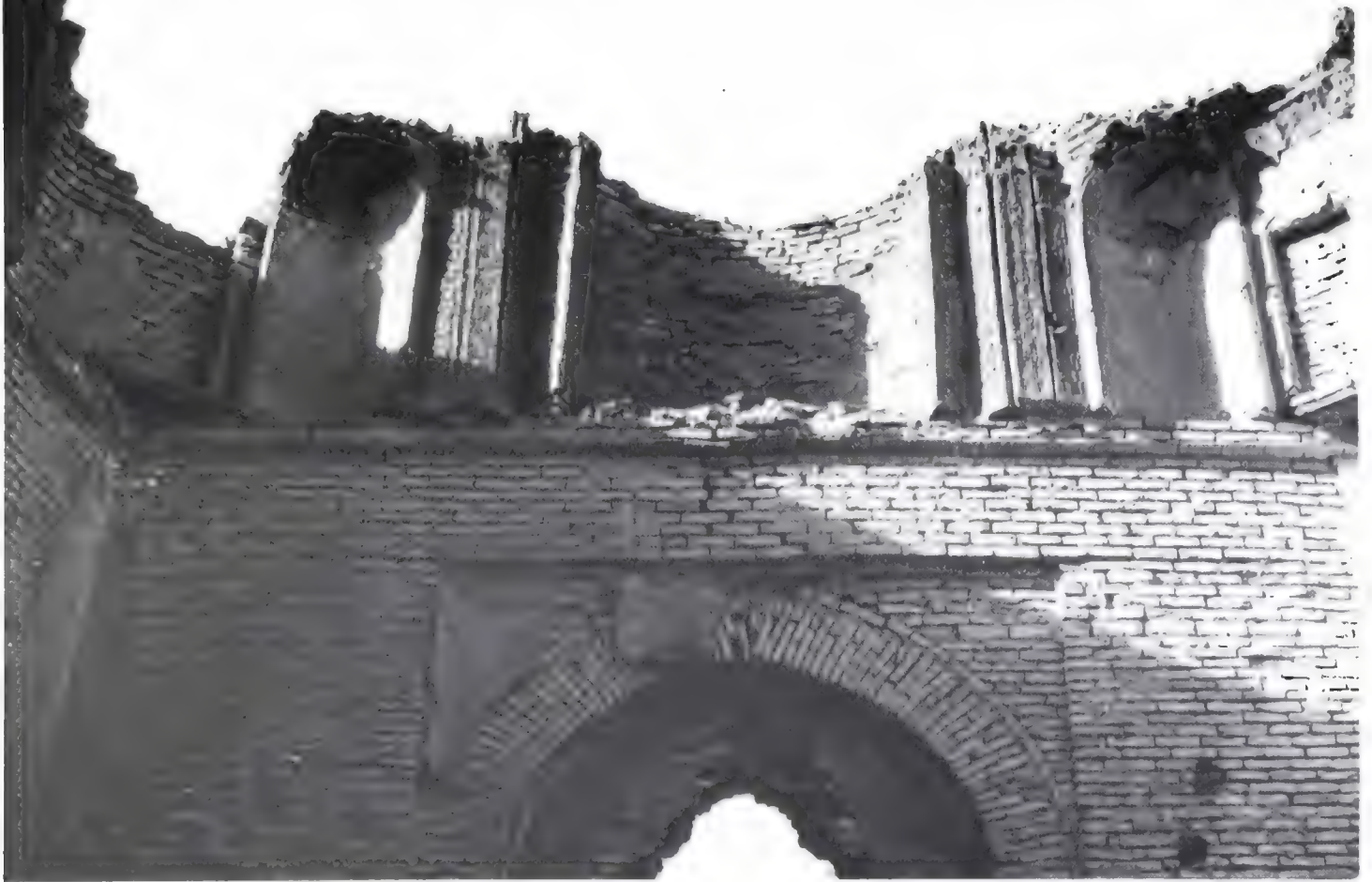


Fig. 6.37: Shahr-i Mashad, zone of transition in main dome.



Fig. 6.38: Shahr-i Mashad, niche with inscription on south facade.

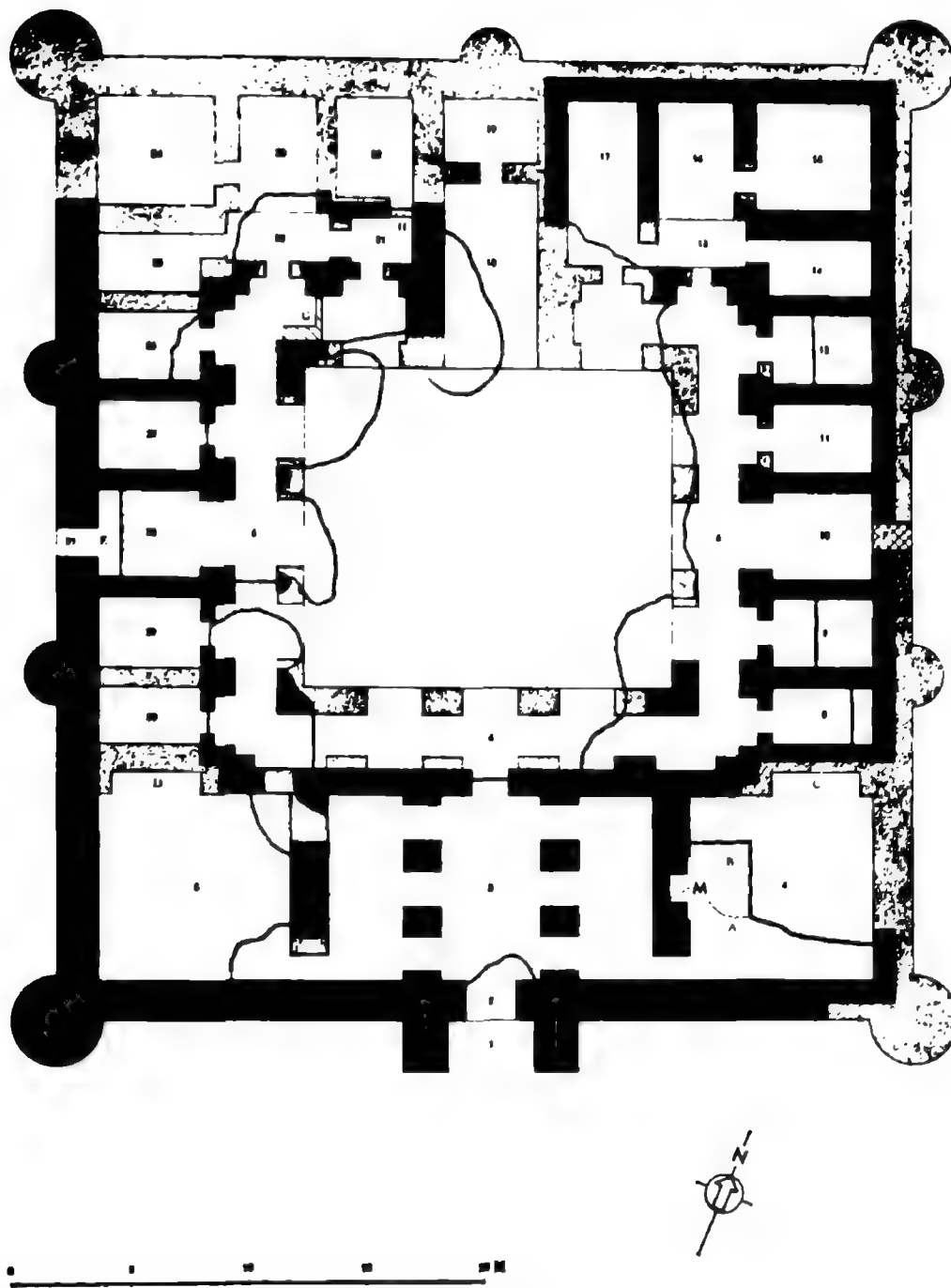


Fig. 6.39: Danestama, ground plan of ruin. (After Le Berre). Scale: 2.5 cm—10 m.

er, Ghorid or Timurid, series of fortifications at Shahr-i Zohak near the confluence of the Amu, Amniyan, Hajjigak and Qunduz rivers (Auboyer, 1968: pls 92–5). A four-*ivan*-courtyard house was recorded by Godard before it was totally destroyed (Otto-Dorn, 1964: pl. XXVII). In the deserted town of Shahr-i Gholghola surface collection of *sgraffiato* pottery indicates a Ghorid occupation (Gardin, 1957); all pre-Islamic and Islamic settlements were burnt down by the Mongols in 1221. Further north, at Danestama, Ghaznavid slip-painted (see above p. 329) and Ghorid incised (see above p. 331) pottery was collected during the excavation of a ruin in the Surkhab valley of the Kataghan province by Le Berre. A stone basement carried a mud brick structure that can be reconstructed as a rectangular building 40.40 m × 36.35 m, protected in each corner by a three-quarter-round bastion, and reinforced on the northern





**Fig. 6.40:** Ghazni, moulded terracotta from the Ghorid phase of the palace of Masud III.

flank by one, on east and west by two semi-circular bastions (Fig. 6.39). In the south a gate flanked by huge walls leads into a vestibule and an open court. The excavator found specimens of wall decoration in stucco of geometric designs. The function of the building is not yet absolutely clear; the many chambers, regularly distributed along the north, west and east walls might indicate a *madrasah*. We shall learn more on ruins, mainly of fortresses, as soon as the excavator of Danestama, Le Berre, publishes his study of Hindu Kush castles.

To the east of the Ghorat are buildings of the Ghorid age, fortifications in the Kunar valley (Fischer, 1969: pl. 35) and ruins in the Lohgar valley (Fischer, 1969: 341).

Finally, south from the Ghorat is Ghazni, where Ghorid rulers destroyed Ghaznavid buildings (see above p. 303) and later constructed a residence of their own, that in turn was razed to the ground by the Mongol attack. This short period of reconstruction under the Ghorids can be recognized archaeologically in an extensive series of small glazed tiles (Scerrato, 1962: 263), mostly square (Fig. 6.40), but also polygonal, for the most part regular hexagons and in rectangular strips, and star-shaped. The dimensions of the square tiles range from  $5 \times 5$  to  $10 \times 10$  cm, the thickness from 0.7 to 1.2 cm. All the tiles have received a monochrome lead oxide glaze, of variable quality but constant for each type, green, yellow, brown, red and turquoise. The decoration is theriomorphic, vegetal or epigraphic. The great majority of the square tiles have a beaded frame enclosed by a double fillet (Fig. 6.40). The gazelle is the animal most frequently represented, with a large tail turned up and ending in a floral device. The neck is drawn in sinuous lines. These tiles have been found mainly in the upper layers of the palace of Masud III, that is, from post-Ghaznavid layers, and from the "House of lustre-ware" destroyed in 1221, the year of the Mongol invasion. They are associated with sgraffiato pottery of the Ghorid period. According to Rogers (1973, 246–9), we have here some comparatively rare documents of animal decoration on secular monuments, also known from animal scrolls and carved marble slabs with a border of paired sphinxes in the palace of Masud III.





Fig. 6.41: Bust, so called Ziyarat of Ghiyath al Din, inscribed on a stone.





Fig. 6.42: Bust, remains of great arch before restoration.

Surface finds of incised ceramics allow us to date to the Ghorid period the mountain fortress of Kafar Qala (Fischer *et al.*, 1974: pls 80, 81) dominating one of the main routes from the north towards the south and the settlements of Islamic Seistan. Another traditional way to Seistan ran east-west: from Kabul via Ghazni-Kandahar-Lashkari Bazar and Bust. Traces of Seljuk culture under Ghorid rule are to be observed in many ruins round Bust, for example in the baked brick Ziyarat of one Ghiyath al-Din or Husain Shah (Hill and Grabar, 1967: pls 155–160; Fischer *et al.*, 1974: pl. 84). In this building, still venerated, are several marble tombstones with Kufic inscriptions (Sourdél-Thomine, 1956). On one of them (Fig. 6.41) four lines on the edge of the rectangular slab praise one Najm al-milla wa l-Din, the support of Islam, friend of the Sultan, Mufti of the east and the west. In the central part under the cusped arch the date of 595 A.H. = A.D. 1199 is given. The arch itself is filled by the beginning of a Quranic text (XXIX, 57 or III, 182/185) and the field above this arch contains the Shahada, the Muslim creed. Bricks with inscriptions of Ghorid age were recently discovered during American explorations in the Helmand area (Crane and Trousedale, 1972: Figs 6–12).

The arch near the citadel of Bust was recently restored (Hill and Grabar, 1967: pl. 152). It may have belonged to a Ghorid mosque or served as a ceremonial arch on the principal

approach to the citadel (N. H. Dupree, 1971: 234). A photograph taken before the restoration (Fig. 6.42) shows the technique by which the well-known horseshoe arches to the left and right of the huge keel-arch were constructed. The decoration of the main arch was comparable with that of the minaret of Daulatabad (Fig. 6.19) in the diaper work of carved terracotta tiles sunk in the hexagonal and star-shaped interstices of elaborate brick interlace.





# 7

## From the Mongols to the Mughals

*K. Fischer*

### Historical Background

The Mongols reached Afghanistan in 1221. The Khwarizm-shah had abandoned his northern territories and fled into the mountains south of the Caspian, where he soon died in abject misery. His son Jalal al-din offered resistance to the invaders in the Ghazni and Hindu-Kush region, but was defeated on the Indus and escaped across the river: the Mongol detachments sent in pursuit never succeeded in overtaking him, and after a stay in India of less than two years he passed on to Iraq by way of Baluchistan and southern Iran, eventually succumbing to assassination in 1231. Meanwhile Chinggis Khan's armies sacked Ghazni, which had been the prince's headquarters. The conqueror himself soon returned to the east, dying in Mongolia in 1227. The slaughter in the cities of Khurasan was enormous. One local chronicler sets the numbers massacred at Herat at 1,600,000 (see *CHI*, 316); and the province as a whole was subjected to a devastation from which it has never recovered.

Underlying these ruthless tactics, in addition to the motive of discouraging further resistance, may have been a longer-term policy of converting well-populated areas into pasturage. We know that the Mongols effected such measures in Central Asia (see Barthold, 1968: 467); and the pasturelands of Badghis, west of Herat, and of Shaburghan, immediately south of the Oxus, were highly prized by the nomads, later becoming an object of competition between the rulers of Iran and Transoxiana. Nevertheless, under Chinggis Khan's third son and successor Ogedei (1229–1241), contrary influences made themselves felt; and Herat was restored around 1236. When fresh Mongol forces were sent to Iraq and Azarbaijan in 1229 to eliminate Jalal al-din, Khurasan was allotted a civil and military administration of its own; though to the east Ghazni and Kabul became the sphere of Mongol detachments which were regarded as the reserve for the main army in Iraq and were responsible directly for intensifying the pressure on India.

On the accession of Mongke (1251–1259) further expeditions were launched against those regions of Asia which remained unconquered. In 1254 the Great Khan's brother Hulegu arrived in Iran with an army which included contingents under princes representing the various branches of the imperial family, especial prominence being given to the descendants of Chinggis Khan's eldest son Jochi, whose territorial base lay in Khwarizm and the steppes of southern Russia. This army, which overthrew the Assassins in Kohistan (1256) and sacked Baghdad (1258), extinguishing the Caliphate, never in fact operated in Afghanistan; but its importance for our purposes lies in the dissensions which broke out within its ranks soon after

the Baghdad campaign. In 1261–2 Hulegu executed the Jochid princes with the army and massacred their troops. Many of the survivors fled east and joined the Jochid contingent operating in Afghanistan under a certain Neguder. The Neguderis, as they came to be known, maintained their independence around Ghazni and in the Indian borderlands for some decades. Consequently, Afghanistan did not at this stage form part of the empire founded by Hulegu in Iran and ruled by his descendants, the ‘Ilkhans’, down to about 1350 (Aubin, 1969: 79 ff.; cf. Longworth-Dames, 227a). Even the westernmost part lay under the influence of a native Persian dynasty, the Kart rulers of Herat (c. 1250–1383), who claimed descent from the Ghorids, and who behaved as highly unreliable vassals of the Ilkhan. To the south Seistan, still ruled by the line of princes who had been in power since 1002, proved still less amenable to the Ilkhans’ control.

Around the turn of the century, the Neguderis were reduced to obedience by the Mongols of Transoxiana, ruled by the descendants of Chinggis Khan’s second son Chaghatai. Their position here was only temporarily disturbed by two invasions on the part of the Ilkhan’s forces, in 1312–3 and 1326, and when the Moroccan traveller Ibn Battuta passed through Ghazni in 1333 he found the region securely under the sway of the Chaghatai khan’s lieutenants. In 1352 even the Karts were obliged to become Chaghataid vassals.

But the authority of the Khan himself was already being appropriated by members of the nomad aristocracy; and in 1369 it passed to Timur, a member of the Turkish tribe of the Barulas, who proceeded to nominate a puppet Chaghatai sovereign but who remained ruler of the empire in everything but name. Timur embarked on a career of conquest that destroyed the various local dynasties who had supplanted the Ilkhans, crushed the Jochids in Russia, and even achieved what his Mongol predecessors had never accomplished, the sack of Delhi. In Afghanistan he captured Herat in 1380, executing the last Kart ruler a few years later: Kabul, Ghazni and Kandahar were all incorporated in Timur’s empire. Although after his death in 1404 they initially fell to a grandson, Pir Muhammad, they were soon annexed by his fourth son Shah Rukh (1404–1447), whose capital was Herat and who was recognized as the head of the dynasty. After the brief reigns of Shah Rukh’s son Ulugh Beg (1447–1449) and grandson Abd al-Latif (1449–1450), Khurasan was disputed among various scions of the Timurid line until Husain Baiqara (1469–1506) finally established his power in Herat and recreated the empire of Shah Rukh: during their reigns the city reached the zenith of its fame as a centre of culture. Kabul, however, now constituted a separate principality under another branch of the dynasty, while the western provinces of Iran fell away, to be ruled first by the Turkomans, and subsequently by the Safarid dynasty (c. 1500).

The end of the fifteenth century witnessed further upheavals in Central Asia. Here a descendant of Jochi, Muhammad Shaibani or Shahi Beg, who had welded together the nomadic confederacy known as the Ozbegs, conquered the Timurid principalities of Samarkand (1499) and Farghana (1504) and began to press on Khurasan, finally wresting Herat from Husain Baiqara’s ineffectual sons in 1507. For a time the refugee prince of Ferghana, Babar, held out against the Ozbegs in the Kabul region. But he had many enemies. The fastnesses of the Hindu-Kush were held by former Timurid lieutenants, while to the south Babar had to maintain himself also in the face of attacks from the Arghuns. Dhu l-Nun Arghun had been governor of Kandahar for Husain Baiqara, and had declared his independence. The

Ozbegs played off against Babar his son and successor; and even after Shaibani's death in battle with Ismail, founder of the Safavid dynasty in Iran (1510), Babar was unable to make any headway. At first he was distracted into an attempt to recover his patrimony north of the Oxus; but when this failed, he again took up the struggle with the Arghuns, who were endeavouring to create a new dominion in Sind. Babar's capture of Kandahar in 1522 was soon followed by the definitive occupation of Herat by the Safavids (1528), thus establishing the pattern which was to last for nearly two centuries and which was not materially affected by Babar's own invasion of India and conquest of Delhi from its Afghan rulers, the Lodis, in 1525. His successors, the 'Moghuls', retained their hold on Kabul from their new base in Hindustan; though Kandahar periodically passed to the Safavids, whose sway extended over western Afghanistan until the rise of the Durranis.

## Later Islamic Sites: Seistan

During recent archaeological field work we have recognized in the mud brick ruins of Seistan the persistence of Ghaznavid, Seljuk and Ghorid art forms. Monuments probably erected mainly under Ilkhanid rule (Fischer *et al.*, 1974-6: 257) contributed to the evolution of Timurid architecture. Reliable evidence from stratigraphic excavations with associated coins and pottery is still lacking and we have also only sparse information from inscriptions and coins (Tate, 1912: 214, 219, 224). Survey in the vast ruin fields, however, helps us to understand the Arabic and Persian historians and geographers who describe rich settlements in the lower Helmand area.

People living in semi-deserts and lands of moving sand dunes depend upon artificial irrigation: the Helmand and to a lesser degree the Khash Rud fed an extensive canal system. According to Islamic writers, such as al-Muqaddasi, Seistan contained few cities, but numerous rural estates, *rustaq*. In antiquity Seistan was known as a fertile land, and consequently was a constant temptation to conquerors. The inhabitants seem to have protected themselves by lines of fortresses and watch towers (Figs 7.1, 7.11). After every destruction the irrigation systems and settlements were rebuilt. The native dynasty of the Saffarids ruled, independently or as governors and vassals, from 867 until c. 1495, under the Ghaznavids, Seljuks, Ghorids, Ilkhans and Timurids. In archaeological exploration, Seistan has even recently quite rightly been regarded as an almost total blank (Grabar, 1973: 38).

Pottery of all these Islamic periods lies strewn together on the desert surface due to heavy wind erosion; caused especially by the so-called 'wind of the hundred-and-twenty days' blowing with great force from June to September (Fischer *et al.*, 1974-6: note 73); thus we find in the same ruin-fields side by side East Persian slip-painted wares, lustre-wares and sgraffiato-wares, of the tenth to thirteenth centuries, as well as Iranian pottery of the Ilkhanid and Timurid periods from the fourteenth to sixteenth centuries. From the Ilkhanid period onwards throughout the fourteenth century we find blue and white pottery, closely resembling Chinese porcelain of the fourteenth century but probably of independent Near Eastern origin. The Timurid period has well known wares painted in blue, greenish-black and green under a clear glaze with floral and animal designs (Fischer *et al.*, 1974-6: pl. 318). Early slip-painted wares predominate in the Ghaznavid ruins of Lashkari Bazar and Bust, connected



with later developments in Seistan, and the same holds true of Ghoriid *sgraffiato* pottery from the Bamiyan valley, Bust and other places. This early Islamic pottery is found in the vast ruin field of Khwaja Siah Posh (Fig. 7.6) on the surface, while Ilkhanid blue and white and Timurid black and blue wares occur in ruins that are still standing up to the vaults, like Gol-i Safed (Figs 7.8–7.11), and in the Timurid settlements of Herat and Balkh.

Under the Ilkhanids typical features of Iranian baked-brick architecture were developed (Wilber, 1955: 56). In Seistan buildings were mainly constructed of mud brick; they displayed a great variety of vaulting techniques, some perhaps of local origin.

The vaults of the period can be classified into major categories: barrel vaults, vaults on a square or rectangular base, half-domes and stalactite vaults. Like the builders of the Seljuq period, the masons of the Ilkhanid period strove to erect their vaults with a minimum of centring and scaffolding. The key to the builders' ability to construct vaults rapidly and with this minimum of technical means was the standard use of planks made of gypsum plaster stiffened with reeds. Liquid plaster and reeds were combined in a mould, the curvature of which reflected the profile of the planned vault. Several such plaster planks, placed in position upon the bearing vaults, divided the envelope of the proposed vault so that the masons had only to fill in the segments between the planks. An important factor is the consistent use of gypsum quick-setting plaster, which meant that if the bed of a row of bricks in one segment of a vault was inclined from the vertical the mason could hold the bricks in place until the mortar had set. In this manner the vault was completed, segment by segment, without the need for support other than the hands of the mason. As a result of this method of construction, these Iranian vaults tended to be unitary constructions.

The first of the major categories of vaults is the barrel vault. This was extensively employed in the Ilkhanid period, either for simple, continuous vaults, or in more elaborate variants. One variant form may be described as the covering of a rectangular area by a series of cross arches, with each cross arch then joined to its neighbours by transverse filler vaults of modified barrel profile.

Other problems lay in the construction of the cupola, i.e. placing a dome upon a square plan. Ilkhanid master builders continued to employ devices common to the Seljuk period. Squinch arches, spanning the corners of the domed chamber, establish the size of the octagon upon which the dome rises. There are also zones of transition with squinched and shield-like pendentives. During this period the double dome appears; its popularity in Iran from this period into Timurid times resulted from a union of symbolic, aesthetic and practical considerations.

In the field of symbolism, research supports the theory that in the Mediterranean world the dome won high favour and monumental expression when it came to be associated with the sacred character of the structure it crowned (Wilber, 1955: 64). In the early Islamic centuries a parallel symbolism seems to have been in force, as many domes rose above tombs, shrines and mosques. However, while Christian literature contains numerous references to the symbolic meaning of the dome, the writings of the Arab and Persian theologians and philosophers have none, nor, indeed, to that of any other architectural feature; but from the monuments themselves, we might conclude that under Islam the dome was a concrete symbol of civil and spiritual authority (Fischer, 1974: 123).

The name Seistan, or Sijistan, derives from Sakastan (Sakasthana) "Land of the Sakas" or Scythians, and was also known to the Iranians as Nimruz, Persian for "A Half Day, or South", i.e. the land south of Khurasan. It possessed in the course of time various capital cities. Extensive Islamic ruins exist at Zaranj, a town erected on earlier Sasanian settlements and referred to frequently as simply "Shahr", "Shahr-i Sistan", i.e. the (main) city of Seistan. From Islamic sources, Seistan or Shahr-i Sistan was well known as the home of Islamic poets and religious teachers (Stern, 1969: 9). In 1383 the city was destroyed by Timur, but according to literary sources it was rebuilt immediately after the catastrophe. Zaranj was on a branch of the Helmand river, and 48 km above the city the stream was confined by a series of dams and drawn off into five great canals which flowed towards the city. One of these irrigated the gardens adjacent to the town, another, the Sana Rud, constituted the city water supply, while the remaining three were for farm irrigation in the vicinity. We can compare this documentary evidence with archaeological evidence supplied by air photographs and field surveys (Fischer *et al.*, 1974: pls 125–30). The city of Zaranj itself was built on the concentric plan with an outer and an inner town, both walled. The chief approaches were from Khurasan on the north, Nishak and Bust on the east, and Fars to the southwest, and to each of these corresponded a gate, with two to the latter in the inner wall. Between the two Fars gates were the inner town markets, the old government house, the prison and the Friday Mosque, the minaret of which can still be recognized in the ground plan, whilst the structure itself has recently collapsed.

Zaranj was connected with the capitals of the Islamic East by caravan tracks leading in all directions. An old route carried the traffic from Central Afghanistan to Seistan along the Helmand river. Near the fort at the present ruin site of Kordu a line of mud brick pillars (Fig. 7.1) marks the site of a settlement that, due to wind erosion, has vanished, like many other medieval Islamic towns of this area. The same is true of a dilapidated castle, "Qala Hauz", still known by this name to the Baluchi nomads, situated in the heart of the Registan desert (Fig. 7.2), reminding us of the fact that traditional land routes passed through arid countries. All these caravan tracks that may be reconstructed from archaeological remains such as Bust, Kafar Qala, Rudbar and Qala Hauz had one common goal: the villages and towns of fertile Seistan on both sides of the lower Helmand, nowadays divided into Iranian and Afghan Seistan.

In trying to combine historical evidence with the extant ruins of Seistan, we have the itineraries of Ibn Rusteh and al-Istakhri (Tate, 1912: 198). The stages from Juwayn to Zaranj, for instance, were Basher, and the site of an old fire temple, Karkuyeh. Basher is a group of ruins known at the present day to villagers and nomads as Peshwaran. At one time there was a town of some size here and part of the southwest wall and a huge fortress can still be recognized (Fig. 7.3). Semi-round towers and three-quarter-round bastions protected the citadel, of a multi-towered type well attested by other Seistan strongholds such as Chehel Burj (Fischer *et al.*, 1974: pls 150–52). The city possessed a mosque (Fig. 7.4) that was recorded in better condition by the first explorers of the site (Tate, 1912: 198; Hackin, 1959c: Figs 114, 115). In the present state we can recognize the remains of magnificent *ivan* structures, wall decoration in horseshoe arched niches and traces of inscriptions frequently alluded to because of their extremely fine workmanship (Casimir and Glatzer, 1971: 62).

In the construction of the *ivan*-hall of Peshwaran and in the wall decoration of this mosque



Fig. 7.1: Kordu, remains of mud towers near ruin fields.





Fig. 7.2: Qala Hauz, mud brick ruins of castle.





Fig. 7.3: Peshwaran, multi-towered citadel.



Fig. 7.4: Peshwaran, facade of mosque.

with horseshoe arches (Fig. 7.4) we may observe the evolution of art motifs that originated under the Ghaznavids, and also the four-*ivan* type of layout as at Lashkari Bazar (Fig. 6.5) and Ghazni (Fig. 6.8) which was to find further elaboration in the provincial art of Seistan (Fischer *et al.*, 1974, pl. 231). Here we shall review the contribution of Seistan to the development of the minaret; one of the rare baked brick monuments of the country is the tower at Khwaja Siah Posh, in the centre of a vast field of heavily decayed mud and mud brick houses (Fig. 7.6) full of slip-painted and incised pottery of the early Islamic period.

We have already considered, in Chapter 6, minarets erected under Ghaznavid and Ghorid rule and displaying the influence of Seljuk art. They played an important role in the evolution of the Islamic prayer towers, leading to masterpieces like the Qutb al-Minar at Delhi. We have to compare purely prismatic (Ghazni: Fig. 6.12) or cylindrical (Daulatabad: Fig. 6.19) forms of tower, the sequence of such units in various storeys, as in the cylindrical tiers of Jam (Fig. 6.20), and finally the combination of straight and rounded forms, as for instance in the original sequence of the upper part of the tower of Masud III at Ghazni. In Seistan, the Mil-i Kasimabad, dated by Tate from inscriptions to the twelfth century, consisted of a square base which formed the foundation for a round tower (Tate, 1912: 269); this building collapsed only recently. Whilst this tower seems to have followed a simple model, Seistan also preserved more complicated structures. The master builders of the Ghaznavid and Ghorid ages had at their disposal a variety of technical and decorative solutions. In the vertical elevation of storeys they combined prismatic and cylindrical units; at the same time they used projecting cornices in the horizontal section of the respective storeys. At Nad-i Ali (Zaranj) there existed until recently a minaret with a first storey of octagonal plan decorated in the middle of each face by semi-circular buttresses (Tate: 1912, 202).

These decorative elements may be studied as structural units at the recently discovered baked brick minaret at Khwaja Siah Posh: here eight rounded and angular buttresses alternate (Fig. 7.5). The tower was decorated with bricks laid to form a series of repeating patterns, lozenges and semi-circles (Fig. 7.6); lines of serrated bricks divided the lower and upper parts of this first storey. We have here various elements of Islamic brick decoration well known from the rich repertoire in the centres of Muslim religious art (Hill and Grabar, 1967: pls 223, 255, 317): at Khwaja Siah Posh in rather provincial expression. We do not know what forms may have crowned the minaret of Khwaja Siah Posh, but we recognize clearly in the ground plan of this twelfth century construction the direct architectural model for the ground plan of the first storey in the Qutb al-Minar, Delhi, erected towards the end of that century (Hill and Grabar, 1967: pl. 524). The second storey of the Delhi monument is closely related to a structural type to be deduced from the lost upper portion of the Ghazni minaret (Hill and Grabar, 1967: pl. 154), whilst the third, star-like storey of the Qutb al-Minar is modelled on the prismatic forms of the still existing Ghazni tower (Fig. 6.12). Thus artistic creations in the heart of Ghaznavid Afghanistan as well as in the far-off region of post-Ghaznavid Seistan contributed to further architectural development in the eastern Islamic countries.

Islamic writers describe the rural settlements and cantons of Seistan, the so-called *rustaq* (plural: *rasatiq*), and we find numerous deserted villages of about 15–30 houses in close vicinity to abandoned ancient irrigation systems; from the latter were fed rectangular fields behind small earthen walls, a protection against wind erosion, still used by Afghan peasants.



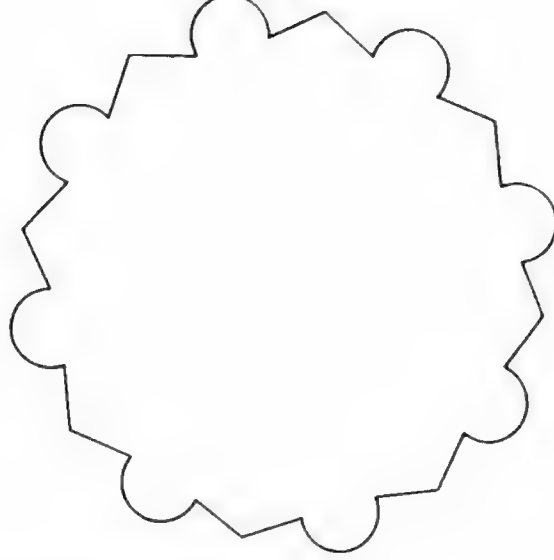
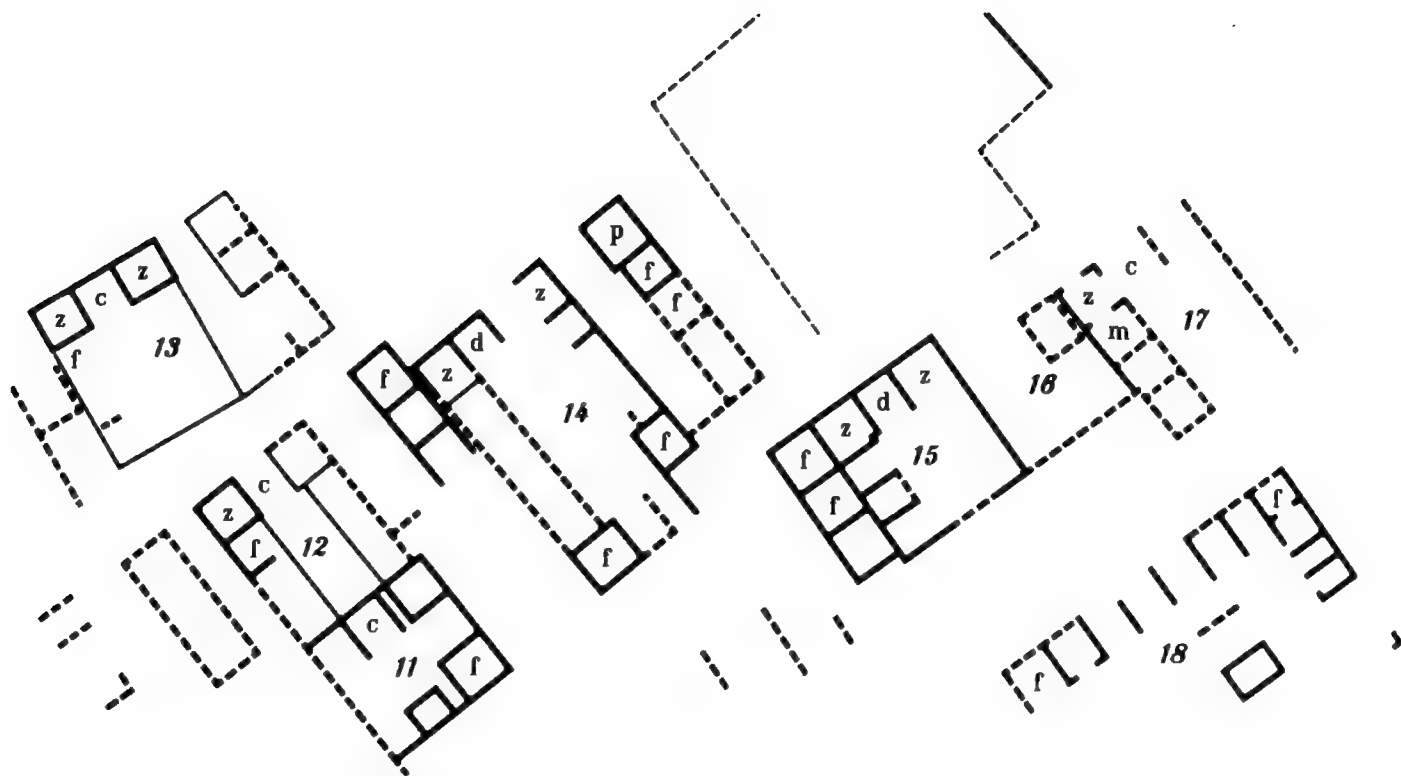


Fig. 7.5: Khwaja Siah Posh, plan of minaret.



Fig. 7.6: Khwaja Siah Posh, mud brick ruins of town with remains of baked brick minaret in foreground.





**Fig. 7.7:** Dewal-i Khodaydad, ground plan of *ivan* courtyard houses in the northern part of the ruin field. (After Morgenstern.)

The houses of these settlements were not orientated north-south or east-west, but with one corner towards the north protecting the interior of the habitation site with one continuous side to the northwest, i.e. towards the direction of the “wind of the hundred-and-twenty days”. The plan of the northern part of a ruin-field nowadays known as Dewal-i Khodaydad shows the arrangement of the houses of the landlords towards northwest (Fig. 7.7). The house ruins represent the so-called *ivan*-courtyard house, details of which we discuss below (Figs 7.9–7.10). Whilst these village-like settlements are numerous (Fischer *et al.*, 1974: map 3), we only rarely find larger agglomerations of about a hundred houses; this corresponds to Muqaddasi’s statement of the tenth century that in Seistan there were no, or few, cities. Although only excavations can give us details of the distribution and function of the buildings, in our present state of knowledge, Peshwaran with its mosque (Fig. 7.4), Khwaya Siah Posh with the minaret indicating a mosque (Fig. 7.6), and an aggregation of about one hundred ruined houses known as “Gol-i Safed” may reasonably be called towns.

The air photograph of Gol-i Safed (Fig. 7.8) shows the position of all buildings—secular as well as religious—in relation to the northwest wind. The main area of ruins—about 90 houses—consists of a type prevailing both in the smaller rural settlements (Fig. 7.7) and in the town-like units: to the centre, on the northwest of an open rectangular courtyard, rises one *ivan*, a rectangular hall, open to the southeast, covered by continuous tunnel vaults or, in one case (Figs 7.9, 7.10), by a series of cross arches with transverse filler vaults of barrel profile—one of the typical vaulting systems of this period. A small door leads from this *ivan* out of the house towards the northwest. The *ivan* opens by a magnificent keel-shaped arch to the

courtyard, flanked on both sides by mud brick walls screening the entrances to additional chambers (Fig. 7.10). The walls are decorated by a series of niches decorated by horseshoe arches, by chequer board patterns and other devices. Round the open courtyard are situated dwelling chambers covered by varieties of dome: squinch, pendentive, Turkish triangle. Half-round and three-quarter-round bastions may in earlier times have possessed a defensive function, but were used by the Islamic builders of Gol-i Safed as mere enrichment and decoration. In the northwest of the city a line of multi-storeyed towers seems to have protected the arable land and irrigation system (Fig. 7.11). Further, the air photograph allows us to identify a central hill with the ruin of a fortress, several cisterns, a series of tombs, two windmills, one mosque and one ziyarat. As we observed, the cultivable area and the open settlements of Islamic Seistan were protected by a line of fortification towers and fortresses. In the agricultural zones between we also encounter unique buildings like the rectangular enclosure of Qala-i Chegini (Fig. 7.12) among isolated dwelling houses, rectangular fields and abandoned gardens. No inscriptions or literary sources inform us of the function of this mud brick complex, which may have been a caravanserai or the seat of a governor. Spacious *ivan* halls with lofty tunnel vaults and baked brick revetments supporting mud brick friezes of typical horseshoe arched niches (Fig. 7.13) belong to an architectural tradition going back *via* Ghaznavid Lashkari Bazar (Fig. 6.6) and early Islamic palaces to Sasanian models.

In the *Tarikh-i Sistan*, the *rasatiq* of Seistan are enumerated. Whilst the majority of the places cannot be located, we may put the *rustaq* of Taq at the ruins of Shahr-i Gholghola (or Sarotar) in the south of Seistan and we may recognize in northern Seistan the *rustaq* of Nishk, represented by the vast ruin-field of this fortified post itself, or Gol-i Safed and Khwaja-Siah Posh.

We shall now consider the archaeological remains of the city of Nishk (Figs 7.14 and 7.15), connected in the past with the river of Nishk, probably the present Khash Rud. Islamic writers name Nishk as a populous district east of Zaranj which gave its name to the eastern gate of the capital. Khash was described as the largest town of this district and was famous for its date palms. The whole district along the Khash river was known as Nishak, and modern maps record the name of Nishk or Nishak for the most conspicuous remains of city and fortress in the northern part of Afghan Seistan. Pottery collected on the surface belongs to a period from the eleventh to the thirteenth century. There is a multi-storeyed castle with four corner bastions (Fig. 7.14) dominating this part of Seistan (Fischer *et al.*, 1974, plates 240, 241, 248). Here we illustrate for the first time details of the gate of the walled city (Fig. 7.15), flanked by double storeyed semi-circular towers, a remarkable piece of eastern Iranian military architecture. City walls are informative about the military character of medieval Persian settlements: portals were always admirably defended, several imposing barbicans guarding narrow entrances with a secondary protection afforded by their close-coupled towers. The walls were further strengthened by passages in the interior. Despite their utilitarian character the walls were in part beautifully decorated with ornamental devices. In contrast to central Persian cities, the ornamentation of the city wall of Nishk is reduced, as might be expected in this provincial area.

On the other hand the landlords in the *rustaqs* of Seistan seem to have been in close contact with the leading cultural centres of eastern Islam. In the facade of a large *ivan* courtyard house



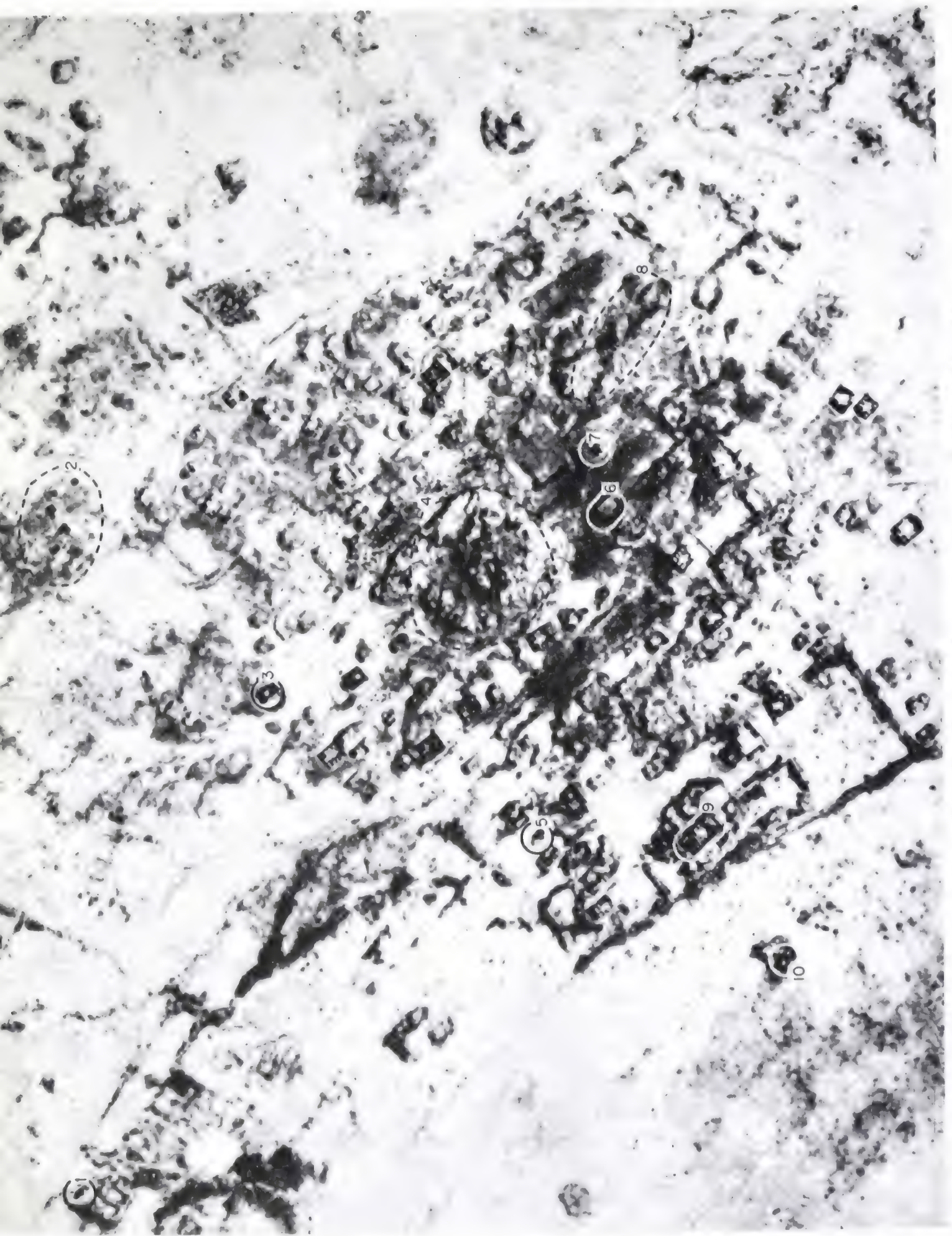


Fig. 7.8: Gol-i Safed, air photograph of abandoned city. 1. Multi-storied tower. 2. Domed tombs. 3. Windmill. 4. Fortress. 5. Multi-storied tower. 6. Mosque. 7. Ziyarat. 8. Hill with graves and 10. Windmill.

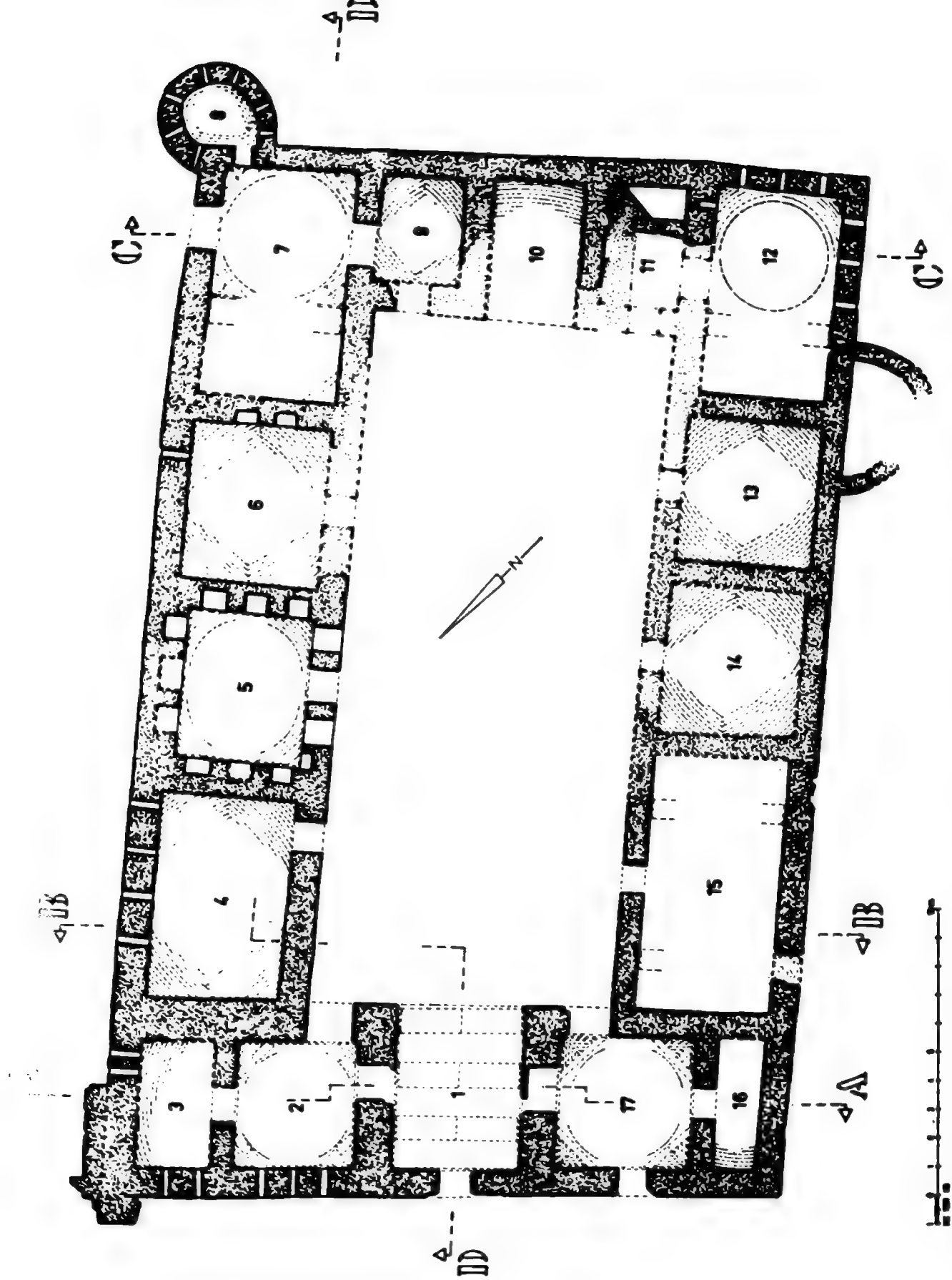


Fig. 7.9: Gol-i Safed, ground plan of courtyard house in the centre of the city. (After Behrens and Klinkott.)



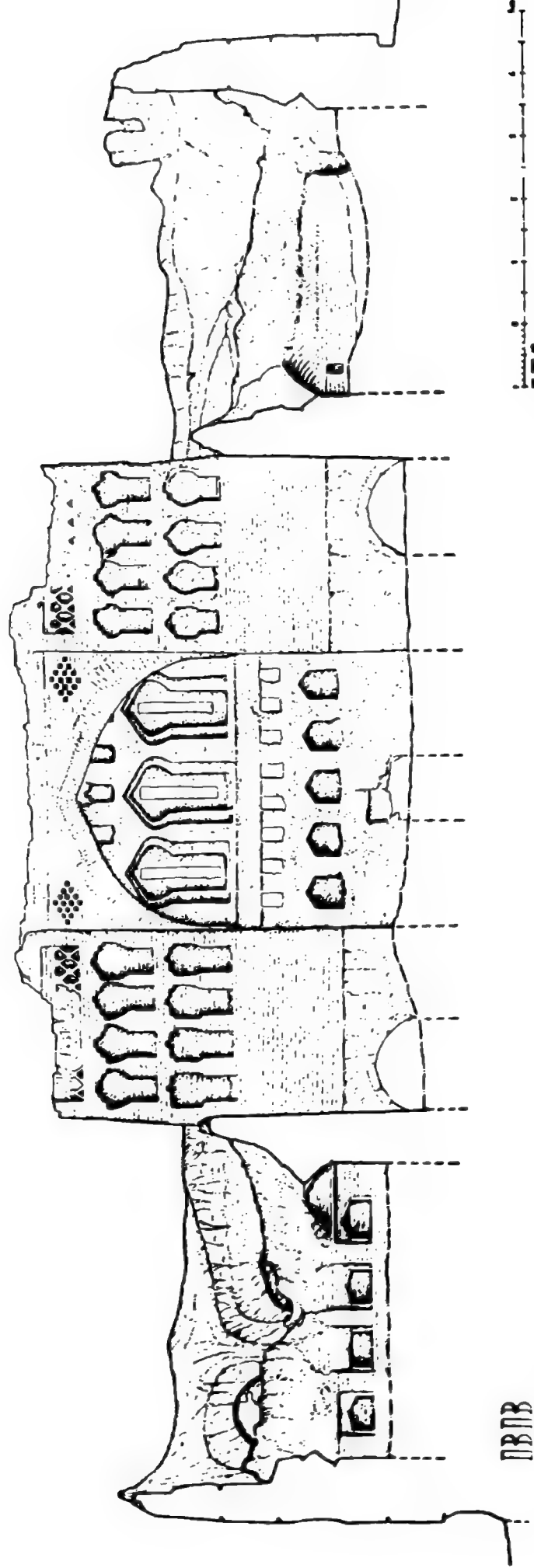


Fig. 7.10: Gol-i Safed, decorated wall of *ivan* in the same courtyard house as Fig. 7.9. (After Behrens and Klinkott.)

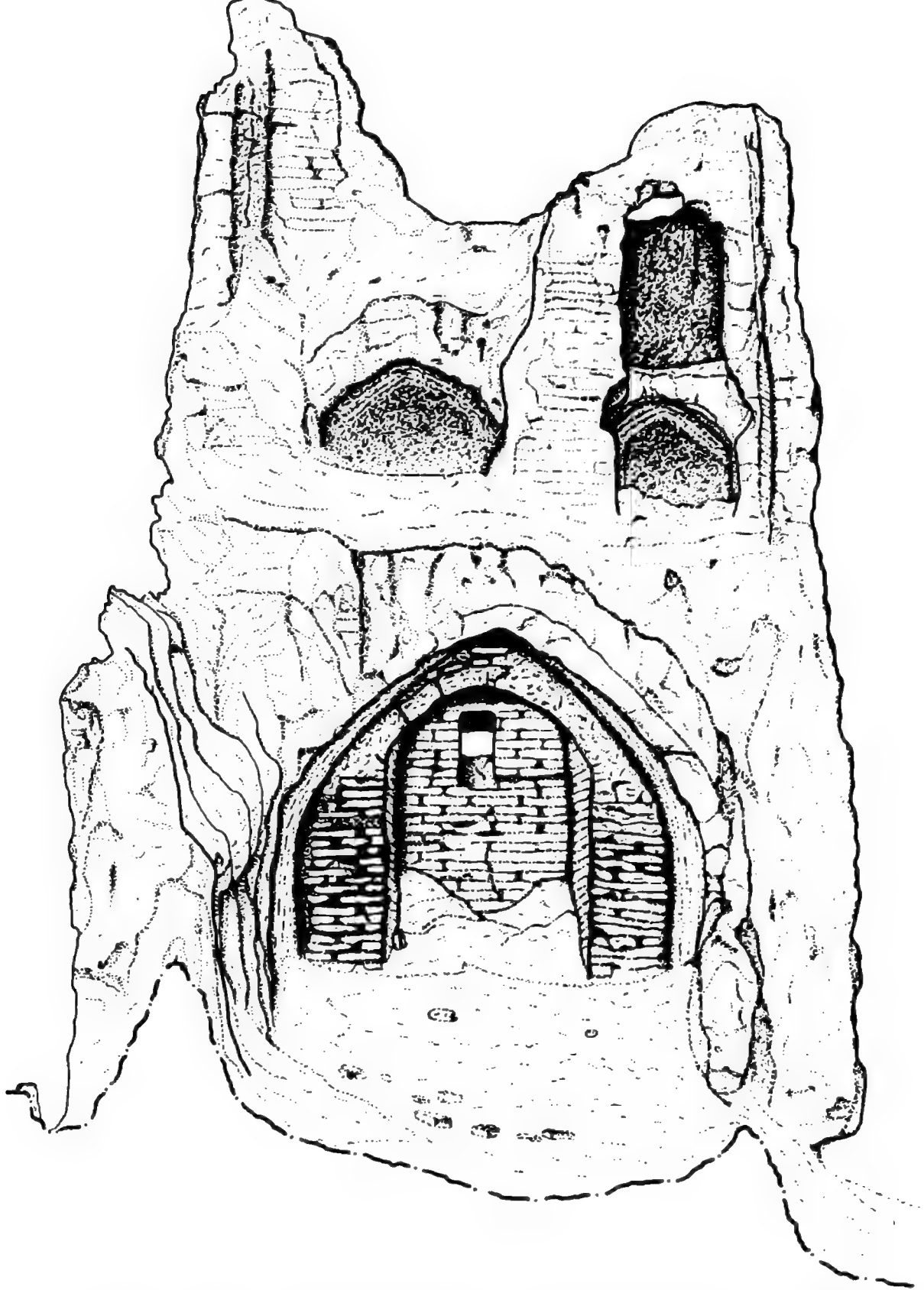


Fig. 7.11: Gol-i Safed, double storeyed mudbrick tower to the north of the ruin-field. (After Tönnessen.)



Fig. 7.12: Qala-i Chegini, general view of the ruin group.





Fig. 7.13: Qala-i Chegini, remains of main ivan.





Fig. 7.14: Nishk, castle with corner bastions.



Fig. 7.15: Nishk, fortified gate of city wall.



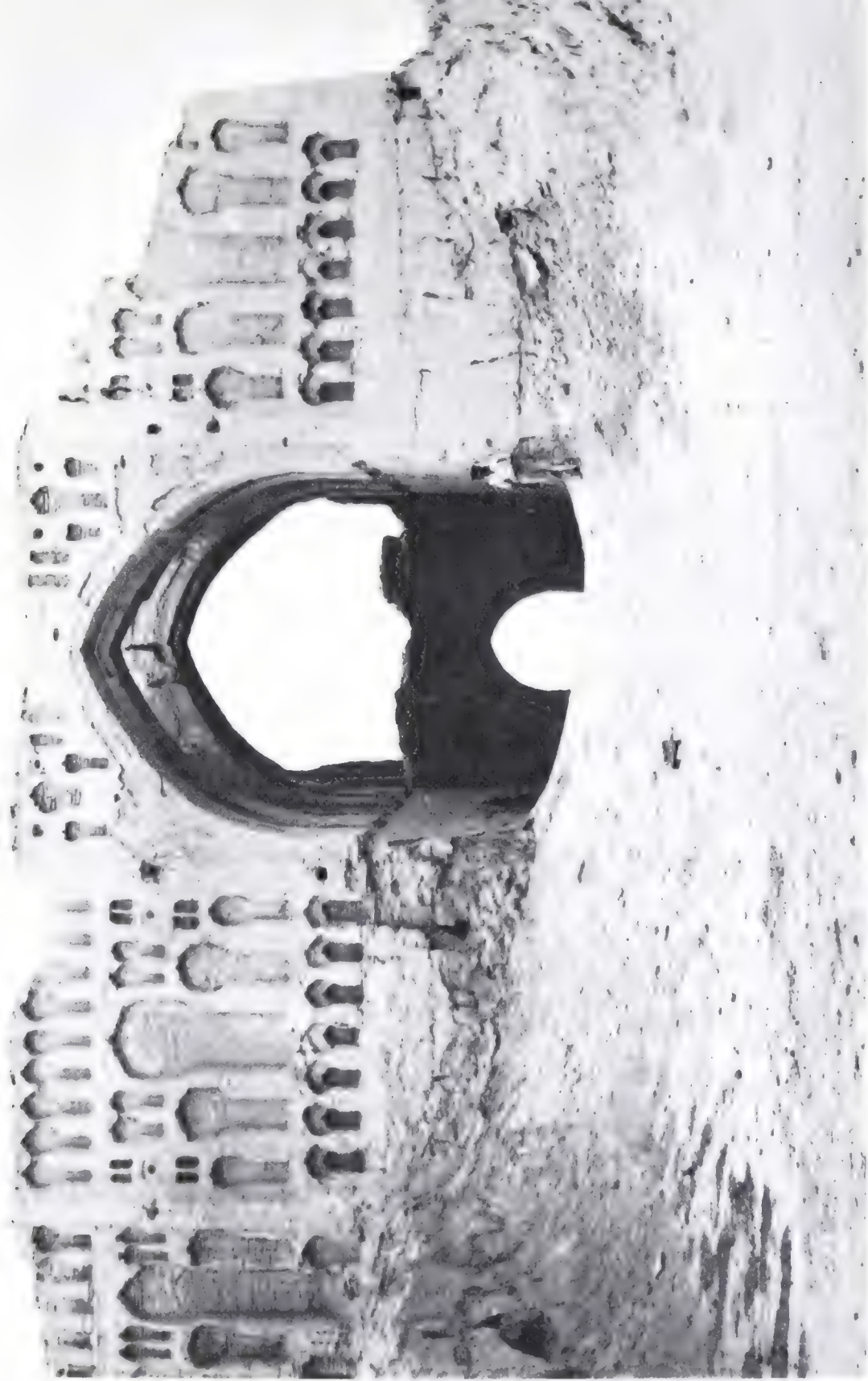


Fig. 7.16: Chegini II, facade of *ivan* towards southeast.

at Chegini II (Fig. 7.16) (Fischer *et al.*, 1974: Map 3) are again reflected architectural and decorative inventions from Sasanian Ctesiphon and Abbasid Ukhaidir. The spacious vaulted *ivan*, the monumental keel-arch door and the distribution of horseshoe arched blind niches in the walls, lead us to conclude that master builders were engaged to create magnificent buildings for local chieftains in cheap mud brick; and that they worked on the same lines as in other centres where architecture and decoration was executed in burnt brick or cut stone.

In the Mongol wars many stone and brick buildings in Asia perished, while in the mud brick ruins of Seistan, creations such as *ivan* halls or decorative motifs—such as cross and star patterns—survived. After the destruction of Seistan by Timur at the end of the fourteenth century, the Timurids from the fifteenth century onwards revived building activities in new centres in western and northern parts of Afghanistan.

After the death of Timur in 1405 the arts flourished for a century under the Timurids at Samarkand in Central Asia and at Herat in Western Afghanistan. Shah Rûkh, Timur's son, who ruled until 1447, effected this change. His wife was Gauhar Shad, whose mausoleum at Herat is one of the masterpieces of Timurid architecture. Their sons were Ibrahim and Ulug Beg, famous for building the observatory at Samarkand, and Baysunghur, who was a great patron of miniature painting and calligraphy. A second period of Timurid renaissance began in 1469, when Husain Baiqara, a descendant of Timur's son Umar Shaikh, assumed power in Khurasan and initiated a peace that lasted until his death in 1506. It was the Herat of this period which became the centre of artistic life, which Babur saw and which this founder of the Mughal dynasty described afterwards as the scene of a golden age and the source of civilization.

## Herat

Herat possesses monuments of outstanding beauty in which we can study the imperial style of the Timurids, but monuments of equal sophistication also existed in the provinces of Afghanistan.

### *City Plan and Citadel*

During the Timurid period, the population increased and new problems arose. While for tenth century Zaranj we have mainly to rely upon sources of Arab and Persian geographers and historians, the present city of Herat gives us an idea of a town of the fifteenth century. Herat was a perfect example of the concentric four quarters plan, with radial thoroughfares cutting the enclosed city into quadrants. In the tenth century the standard arrangement already prevailed: a citadel with four gates set on the main axes, which corresponded with the four gates in the city wall. This had 149 towers and was surrounded by a double moat. Inside each gate was a market. By the fifteenth century, although the city had in the interval been rebuilt by the Karts, it had essentially the same outlines. The city wall, already in disrepair by the end of the fifteenth century, was still guarded by towers and encircled by moats. Today, a few round towers with much decayed tile mosaic are the only remains of a past glory (Wolfe, 1966: 11). The fortresses and city walls of Herat have been frequently illustrated in surveys of



the twentieth century, shown still in military use (Niedermayer and Diez, 1924: Fig. 147) or in a ruined state (Fischer, 1969: pl. 2). Here we publish a drawing by Sir Edward Law Durand, assistant commissioner to the Afghan Boundary Commission, taken in 1885: the Kushk or northeastern gate of Herat (Fig. 7.17) with traces of Timurid fortification and superimposed arches in a magnificent gateway, restored in post-Timurid times but in crumbling ruins by the end of the nineteenth century.

### *Herat, the Musalla Complex*

A great building project was initiated by Queen Gauhar Shad in 1417. She commissioned the foremost architects of her day, such as Imad al-Din of Herat, to build for her a *madrasa*, or place of learning, and a *musalla*, or place of worship. One entered the *madrasa* through a lofty portal flanked by graceful two-balconied minarets to a square courtyard, to the right of which a domed chamber was built for her mausoleum. It was completed in 1432. Imposing minarets rose on the corners of the building project. Later, Sultan Husain Baiqara built a *madrasa* to the east on the other side of the canal. Here there were lofty gateways, arcades, domes and, again, majestic minarets. Only the minarets and mausoleum remain. The interior of the mausoleum is based on a square of 9.5 m. Four recesses are roofed by four great arches, from the haunches of which spring concealed squinches (Fig. 7.18). Inside, four big interlacing arches form elongated squinches. Above the four intersecting points of the interlacing arches, four shallow, fan-shaped squinches support an octagon (Fig. 7.20) above which a zone of sixteen small stalactite niches leads to the ceiling dome. The whole system is enriched with stalactites, in full relief or flattened, with fan-vaulting in the squinches and with a general multiplication of the architectural pattern by polychrome painting. The unique, and at the same time typical, Timurid feature of the building is that, as well as a ceiling dome, it possesses an intermediate constructional dome which is visible from neither outside nor inside. The exterior decoration of the mausoleum is again of special beauty. The ribbed dome was popular with the Timurids and this one is very similar to the Gur-i Emir mausoleum at Samarkand. Above the base a tall drum ending in a bulbous fluted dome rises high above the ground. The dome is of Persian blue, the flutes are patterned with royal blue lozenges centred with red, yellow or white. These flutes are supported by stalactite corbels circling the drum (Wolfe, 1966: 33). The minaret which stands to the east of the mausoleum was one of a pair which stood on either side of the portal to the Queen's *madrasa* (Fig. 7.19). The shaft of the minaret belongs to the simple circular variety mentioned earlier. Two balconies, the muezzin's platforms, ring the shaft and each one is heavily ornamented with deep stalactite brackets similar to, but more ornate than, the corbels on the mausoleum dome.

### *Herat, Gazar Gah*

The most celebrated shrine in Herat is situated to the east of the city and is known as Gazar Gah. It is built around the tomb of the famous eleventh century Sufi poet and philosopher Khwaja Abdullah-i Ansari, born in Herat in 1006. A long inscription explains that the building was restored by Shah Rûkh in 1428. In the interior we face a tall arched *ivan* in a high wall



Fig. 7.17: Herat, Kushk gate in the fortified city wall, drawing by Sir Edward Law Durand (1885). India Office Library.

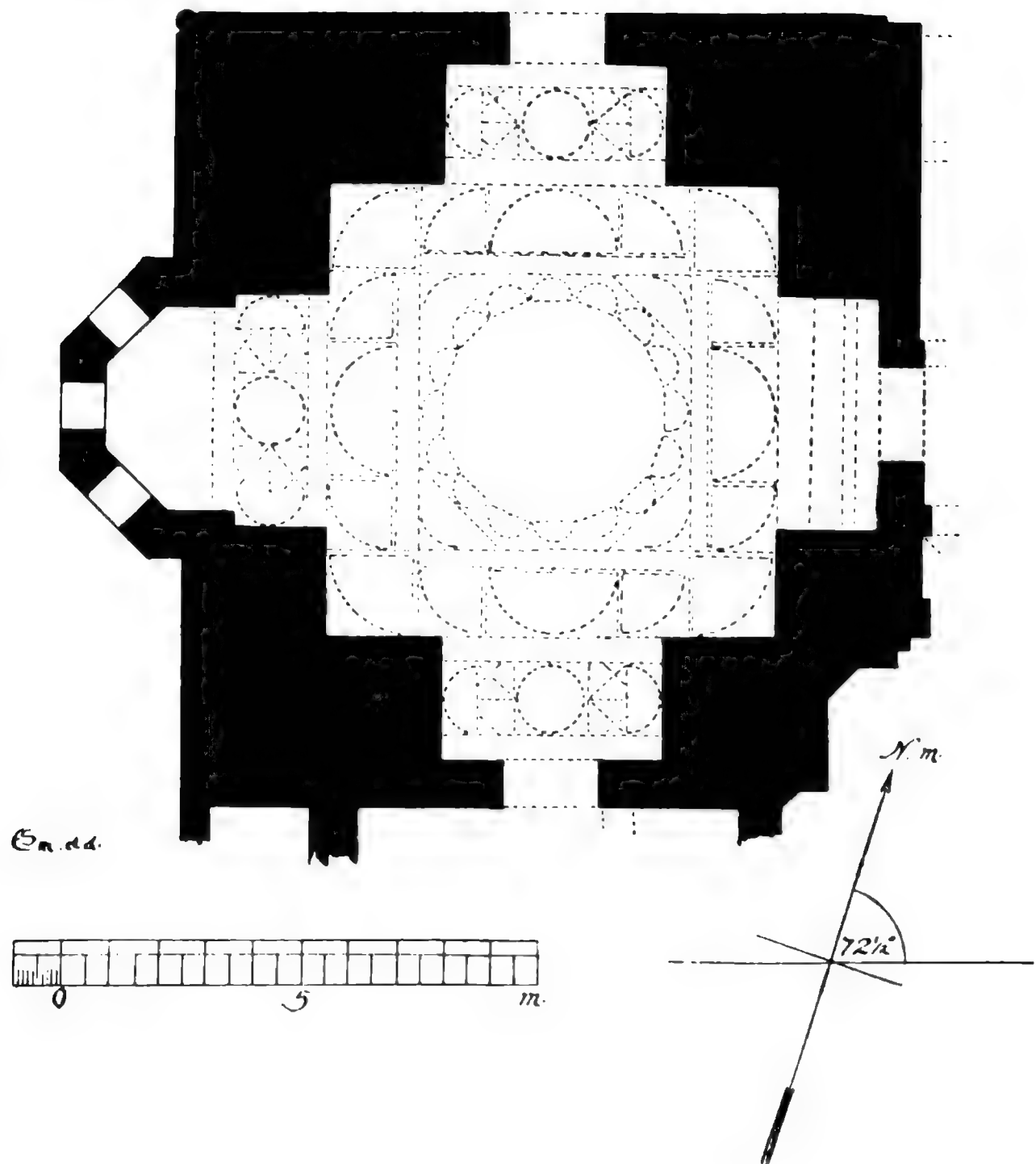


Fig. 7.18: Herat, mausoleum of Gauhar Shad. (After Pope.)

crowned with an arcade of five arches topped by two cupolas. Tall *ivans* in high walls, which emphasized their towering effect over their surroundings, were extremely popular with the Timurids. Fortunately, remains of the splendid interior decoration have been preserved (Fig. 7.21). The *ivan* at Gazar Gah offers one of the most varied samples of Timurid decoration. It is composed of a series of squares and rectangles. The entire surface is covered with inscriptions repeating tributes to the greatness of God. Recently the whole complex was interpreted as a 'Hazira-Compound'. In its primary sense this is an enclosure, most commonly in stone or

wood, and very early used for the prophet's tomb in the Omayyad mosque at Medina. It was another solution for tombs instead of the domed variety mainly used in Iranian countries (Golombek, 1969b; Rogers 1970 1).

### *Herat, "Great Friday" Mosque*

(Fig. 6.33)

We have already referred to the Ghorid parts of this building (Fig. 6.34) and mention below the large bronze cauldron preserved in the courtyard. Here we sketch the history of this famous mosque which reached its greatest extension during the Timurid age and has now become a centre of modern architectural and decorative restoration work.

In the tenth century, Herat's great mosque was already an important centre of Islamic thought. This building was destroyed by fire and reconstructed on a magnificent scale by Sultan Ghiyath al-Din of the Ghorid dynasty in the year 1200. Mongol raids destroyed much of the Ghorid mosque, which was again repaired and extended by the Kart kings, whose devoted attention was continued by the Timurids. The period of greatest magnificence came during the reign of the Timurid Sultan Husain Baiqara in the fifteenth century. Mir Ali Sher Nawai, minister, poet and patron, personally directed its redecoration in 1498. Badly damaged during the sixteenth century, it was later repaired by successive rulers. Nowadays there is a workshop where young Afghan artists are being taught architectural work and decoration on traditional lines.

A corridor leads to the main courtyard, which is paved with brick. Directly ahead, on the west, is the principal *ivan* or the mosque, its arched entrance flanked by minarets. On either side of this hall there are smaller *ivans*, their walled entrances pierced with doors and windows. The inner face of the courtyard is covered with a profusion of delicate floral motifs. Arabic and Persian calligraphy gracefully interrupts these designs. Scattered here and there throughout the mosque one may see fragments of tile work from the fifteenth century. The tomb of the Ghorid king accredited with the building of this Friday Mosque lies under a dome situated behind the north *ivan*. The unadorned tomb lies in an octagonal room, undecorated except by a series of arched recesses (Wolfe, 1966: 12-20).

### *Herat, Mosque of Hauz-i Karboz*

In the suburbs of Herat, the mosque of Hauz-i Karboz lies hidden behind a high mud brick wall near a streamlet with a reservoir, after which the mosque has received its local name. This sanctuary constitutes a rare example of the "Guzar Mosque", i.e. a mosque of that particular city quarter. In Timurid Central Asia this type of building was widespread, but is now rare. They are of small dimensions, but exhibit all the splendour of their age. Fortunately, the *mihrab* of this mosque has been preserved (Fig. 7.22). Its mosaics contain Quranic inscriptions, while another wall decoration carries the date of construction—845 A.H. (A.D. 1441/2), in the reign of Shah Rûkh. The exquisite Timurid calligraphy is among the best examples of that style (compare Schimmel, 1970:pl. XXVId).





Fig. 7.19: Herat, mausoleum of Gauhar Shad, interior view.



Fig. 7.20: Herat, Musalla complex, minaret.

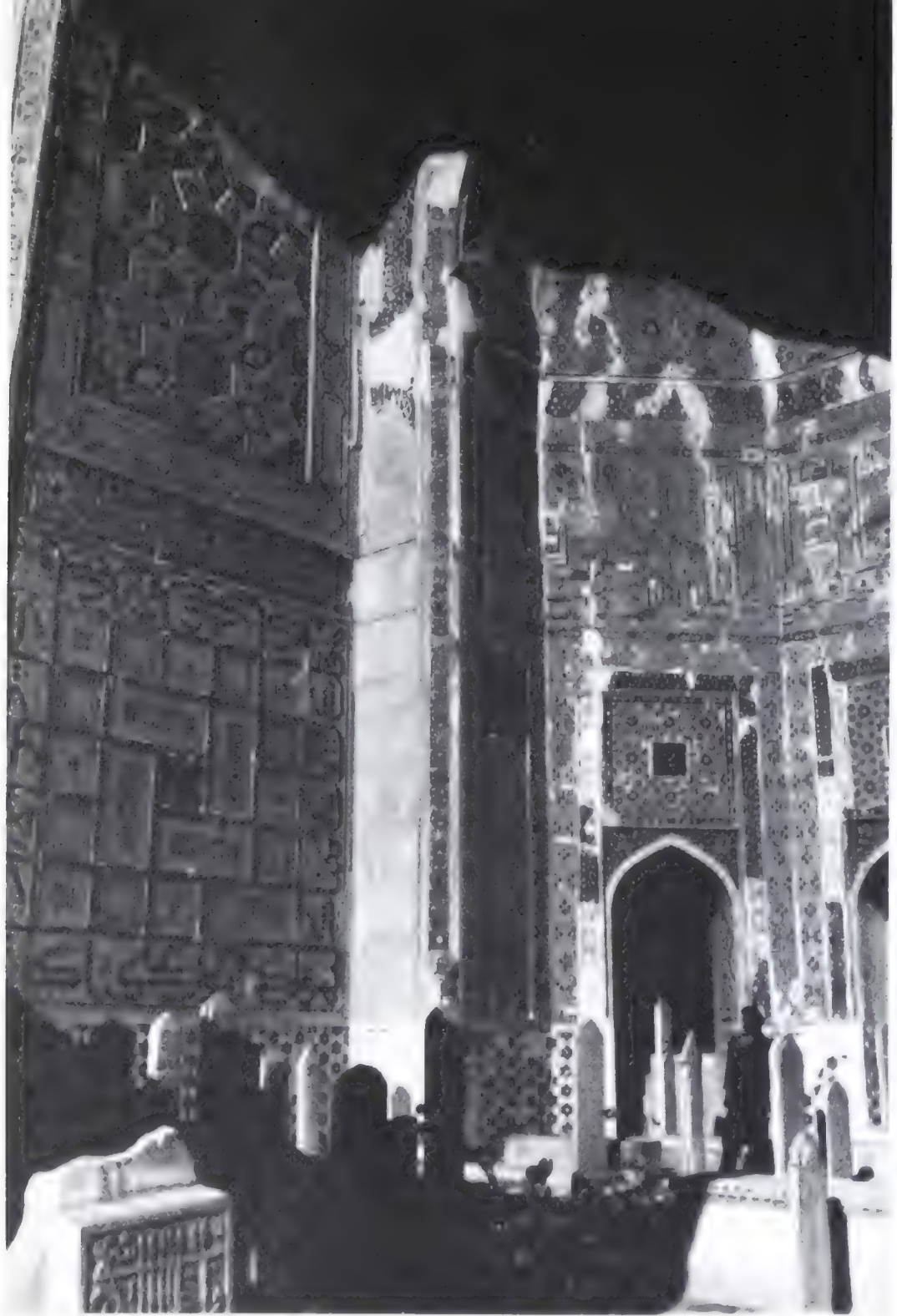


Fig. 7.21: Herat, Gazar Ghar, view of main *ivan*.



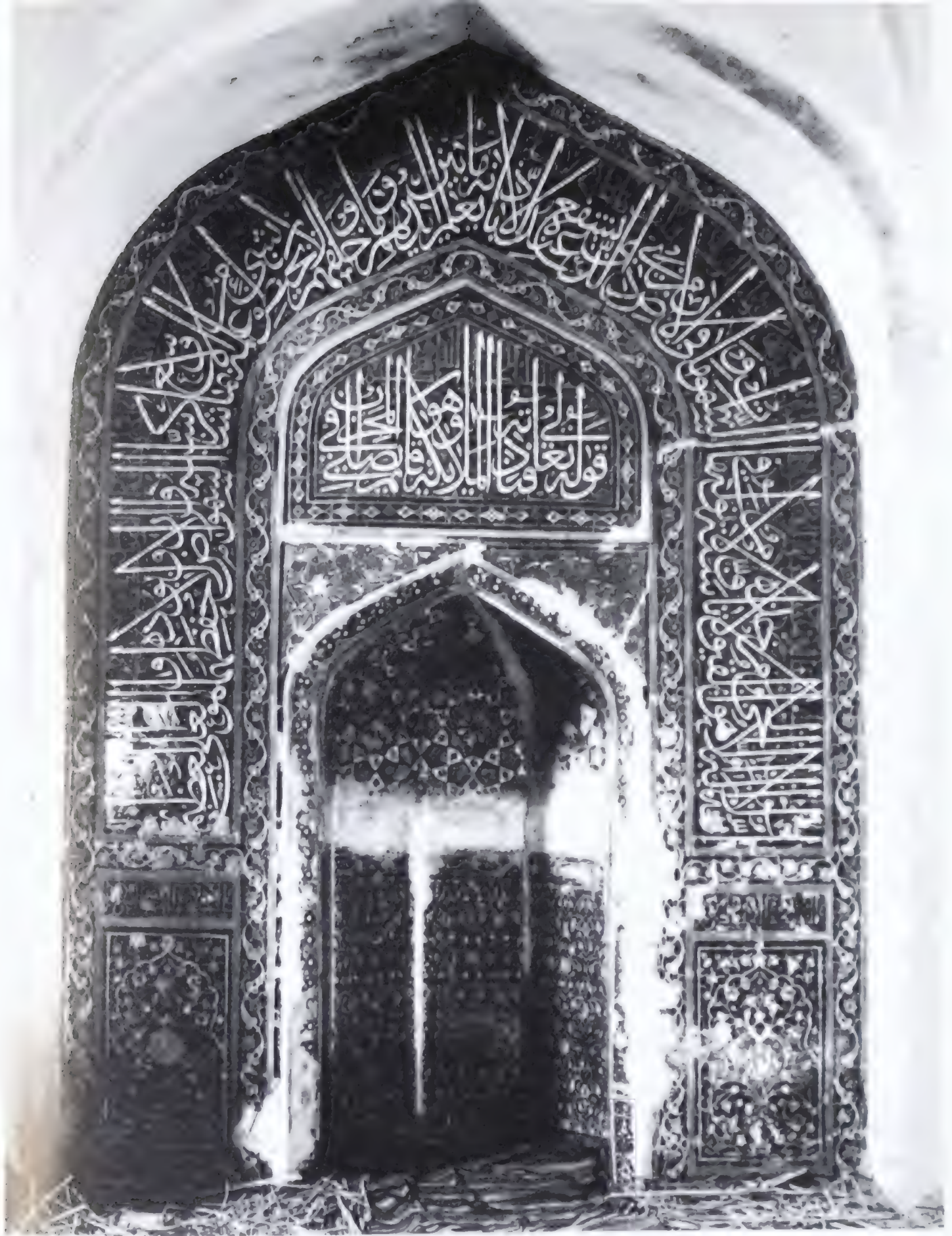


Fig. 7.22: Herat, mosque of Hauz-i Karboz, mihrab.



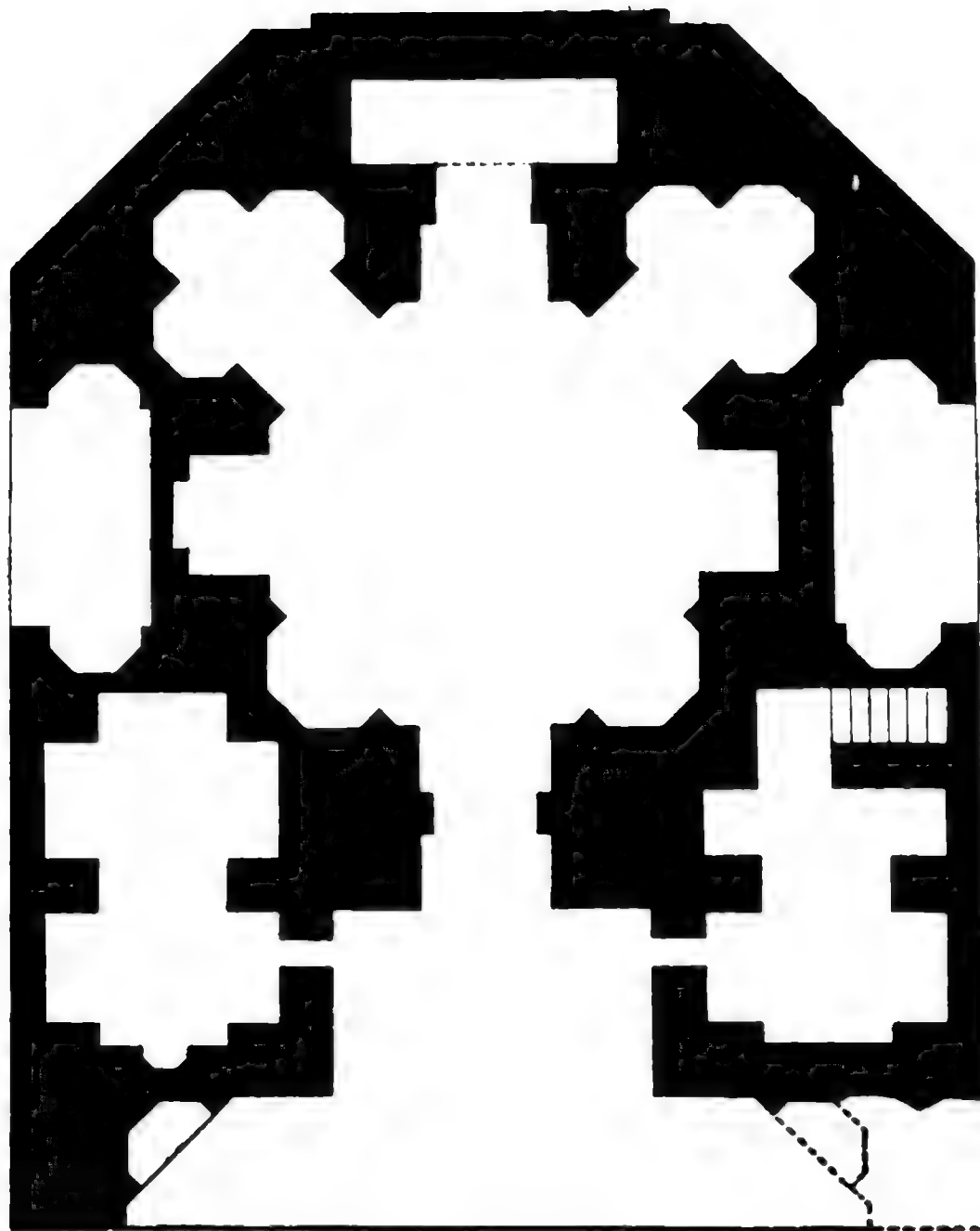


Fig. 7.23: Herat, mausoleum of Shaikh Zadeh Abdallah, ground plan. (After Pugachenkova.)

### *Herat, Mausoleum of Sheikh Zadeh Abdallah*

On the northern outskirts of the city, opposite the modern garden with Gauhar Shad's tomb, we find the mausoleum of the Sheikh Zadeh Abdallah, a highly honoured man who died in 134 A.H. (A.D. 751-2). The present architecture belongs to the fifteenth century. The main room of the building complex is an octagonal structure (Fig. 7.23) covered by eight interlaced arches forming pendentives that carry a dome on a twelve-sided drum. This building preserves typical eastern Iranian features. The octagonal ground plan is of a type of which the history has recently been established by excavation of an Ilkhanid building at Ghubayra (Fehérvári, 1974: 39); the interior of the building has a complex pendentive structure and a high dome.

### *Ziyarat Gah*

This is a small village 40 km to the south of Herat, 12 km west of Herat airport. Khwandamin, who compiled a list of the remarkable buildings of Herat and environs, mentioned two mosques of Husain Baiqara's times. The "Great Friday" Mosque is situated in the centre of the village. There is a fairly well preserved inscription in Arabic over the entrance which includes the name of Sultan Husain Baiqara. Traces of the original mosaic work on the outer wall attest to the fact that it was embellished during his time in a style similar to the Timurid section of Herat's Friday Mosque. This sanctuary of Ziyarat Gah is built in the familiar style with a large open courtyard and *ivans* in the centre of three walls. The main *ivan* on the west is framed by two towering minarets (Fig. 7.24) rising from the pavement. On the east, the vestibule is flanked by two rooms; an indoor mosque on the south, a former *madrassa* on the north. Outside the village, there are many ruined mosques, ziyarats and countless graves, many of which date back to Timurid times. The Khaniqah-i Mullah Kalan lies to the south of the village and was once a most elaborate construction. There is an inscription by Sultan Husain Baiqara over the entrance and the interior suggests that of Gauhar Shad's mausoleum. Even today we get a full impression of the original architectural strength by the ruins of the keel-arch of the *ivan* (Fig. 7.25).

### *Kohsan*

The village is situated about 100 km to the west of Herat, north of the Islam Qala road. It is dominated by a blue dome from which most of the tiles have fallen (Fig. 7.27), sitting on a high drum similar to the dome of Gauhar Shad's mausoleum at Herat. An inscription circles the drum and the Persian blue and dark blue decoration on the base is used sparingly against the background. A section of the monument shows the type of Timurid double dome (Fig. 7.26).

### *Khanekah of Sard al-din Armani*

This is a ruin in the village of Deh-i Minar to the southwest of Herat, connected with the reign of the Timurid ruler Abu Said, 1452–1464. The square, two-storeyed building was constructed around a square room opening by *ivans* towards the main directions.

### *Kush Rabat*

This is a caravanserai on the old route from Herat to Merv. From Timurid times survives the main structure of the rectangular building, with a monumental gateway, vaulted chambers and semi-circular bastions on the long sides and three-quarter bastions on the corners.

## Ghazni

### *Mausoleum of Shah Shahid*

A cruciform central hall is surrounded by an octagonal wall. Four main *ivans* were vaulted by keel-shaped arches and pendentives carried a dome of similar section.



Fig. 7.24: Ziyarat Gah, "Great Friday" mosque.

## Mazar-i Sharif

### *Shrine of Hazrat Ali*

All knowledge of the final resting place of Hazrat Ali, assassinated in A.D. 661, was lost until the beginning of the twelfth century, when its existence was revealed to a Mullah in a dream. The great Seljuk Sultan, Sanjar, ordered a shrine to be built here in 1136. Chingghis Khan destroyed this building, having heard there was a great treasure beneath its pillars, and again





Fig. 25: Ziyarat Gah, Khaniqah-i Mullah Kalan.

The grave of the saint lay unmarked, until a second revelation occurred during the reign of the Timurid Sultan Husain Baiqara. He also ordered an elaborate shrine to be constructed, in 1492. None of the fifteenth century decoration remains, but modern restoration has returned the building to its original shape and it stands today as one of the most colourful buildings in Afghanistan. Near the east corner there stands a ruined mausoleum, the vaulting system of which is a continuation of that practised at Herat and other earlier Timurid buildings. Here the elongated squinches resting on the cornice are extended into pendentives groined in four lobes and thus containing no less than fourteen compartments. These support what seems to be a unique device: a duodecagonal cornice leading to a zone of six lattice windows alternating with six niches.



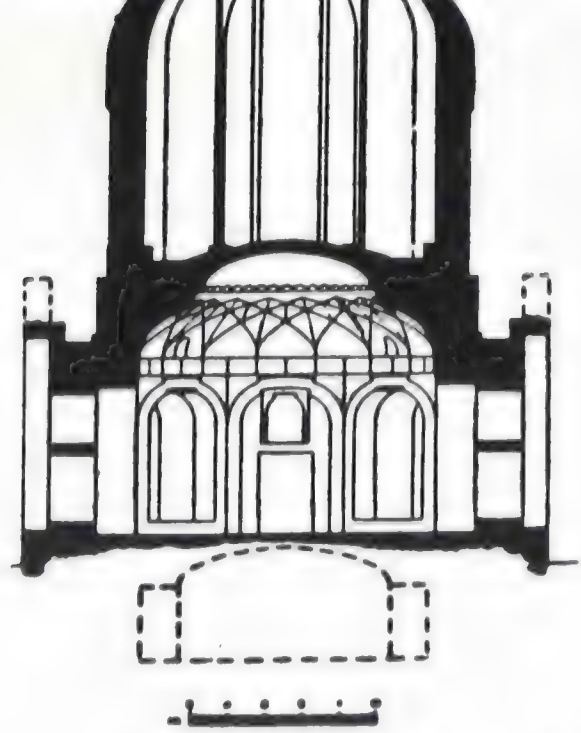


Fig. 7.26: Kohsan, mausoleum, section. The scale bar shows 0 5 m. (After Pugachenkova.)



## Balkh

Balkh, “Mother of Cities”, gave its name to the fourth quarter of Khurasan in ancient Islamic historiography. Yakubi speaks of Balkh as the greatest city of all Khurasan. It had three concentric walls and thirteen gates, and Muqaddasi said that it had been called in early days the “beautiful Balkh”. In our first chapter we have studied an Abbasid building an example of the architecture of this early Islamic period. According to Yakubi (Le Strange, 1905, 420), there were two Friday Mosques in the city. Istakhri mentioned that the houses were built of sun-dried bricks, and the same material was used in the city wall. Recently, archaeological research revealed Timurid pottery in this wall (Gardin, 1957: 84). This fortification of Balkh has a long history, from pre-Christian times onwards, and the Timurid wall marks the last important period of the city (Dagens *et al.*, 1964: 90–102). Furthermore, we know of a suburb of Balkh called Naubahar from which pre-Islamic remains are reported. The Mongols devastated Balkh in 1220 and, according to Ibn Batuta, Chingghis Khan ruined a third of its great mosque in his fruitless search for the hidden treasure. When Ibn Batuta visited this district in the first half of the fourteenth century Balkh was still a complete ruin. All the more, therefore, are we interested in the Timurid restoration of the fortress and city. Of most interest is the shrine of Khwaja Abu Nasr Parsa, built in memory of a distinguished theologian who died at Balkh in 1460. The plan of the building is octagonal. Four wings are attached to four alternate sides and two of these, rising to two storeys as they flank the immense portal, form a sort of screen round the front of the building. The whole of this front, including even the corkscrew pillars (Fig. 7.28) that flank the main facade, is veneered in faience, whose predominant tint is a cold silvery blue. On top of the octagon sits the drum, also covered in mosaic, and from beside it rise two circular minarets. The structure is a typical Timurid double dome. The inside of this fantastic structure reminds us of the squinch architecture of the Gur-i Mir Samarkand. Above the cornice eight latticed windows alternate with eight niche panels, whose heads are filled with stalactites.

## Timurid Works of Art

A number of small-scale works of art also survive from this period, of which a few examples must suffice.

*Herat, Bronze Cauldron in the Courtyard of the Great Friday Mosque*  
(Fig. 6.33)

This cauldron, 4.8 m around and 4.5 m in depth, stands in the southeast corner of the central courtyard. It was originally used as a receptacle for a sugary syrup called *sharbat* which was served to worshippers on feast days. Cast in two sections, its decoration consists of two bands



Fig. 7.28: Balkh, shrine of Khwaja Abu Nasr Parsa.



of script in Arabic and Persian over large arabesques. Timur ordered a replica for a mosque in Turkestan, and Chinese ambassadors to Shah Rukh's court also mentioned this cauldron in their reports. The first band is a verse from the Koran. The second tells us that the cauldron was presented to the mosque by a king Muhammad, son of Muhammad, son of Muhammad the Kart, and gives the date of its creation as 1375, one generation before the Timurid period proper. The second line of the inscription includes a verse from Sadi, the eminent thirteenth century Persian poet. As in other metal vessels of the Timurid period, one observes the basic qualities of monumental form and simplicity of design, and decoration limited to relief and engraved patterns of an epigraphic and floral-arabesque nature.

*Metal Ewer, British Museum, London*

(Fig. 7.29)

This piece of a traditional technique is signed by a certain Muhammad Ibn Ibrahim al-Ghori, dated 903 A.H. (A.D. 1497). The inscription also states that the piece was made for Sultan Husain Baiqara. This places it in a group of Herat metalwork, to which belong other small vases and ewers decorated with floral patterns of relatively simple, repetitive and highly stylized form. The floral motifs are on a small scale, and generally based on a combination of palmettes and lancette-leaf arabesques that either cover the exteriors of these vessels in a continuous all-over pattern or are organized into a network of cartouches.

*Shah Namah, illustrated manuscript written for Muhammad Juki, Herat, about 1440. Royal Asiatic Society, London, MS.230*

(Fig. 7.30)

The miniatures are small in scale, painted with great skill in enamel colours, the figures dwarfed by the brilliance of the landscape. The artist shows great interest in the natural world, so that it takes over the function of dramatic setting and the action of the figures is quite subservient to it. There is a tendency to elaboration in such features as the rocks which now form great masses in unreal colouring. Trees are windswept and clouds conspicuous with pink shading to the white swirls. The romantic spirit of the heroic epic, *Shah Namah*, is complemented by the lively scenes, as for example in the history of Rustam and the Div Akwan. According to the text, the story is as follows: there came a herdsman before Kai Khusrau, the Shah, and told him that a savage wild ass was destroying his horses. Now the Shah knew this was a demon that had taken the disguise of an ass, and he sent for Rustam to fight against him. And Rustam obeyed and, mounted on his horse Rakhsh, went to meet the demon and fought with him. But whenever he caught him with his cord he vanished from sight. So after three days and nights Rustam was wearied, and lay down to rest. Then the Div came near and, loosening the ground where Rustam lay, he lifted it up and flung him into the sea, that crocodiles might destroy him. But Rustam drew his sword and drove them away and struggled





**Fig. 7.29:** Metal ewer, signed and dated by Muhammad ibn Ibrahim al-Ghori, 903 A.H. = A.D. 1497, made for Sultan Husain Baiqara. British Museum.

to the shore. And after finding Rakhsh, who had been caught and kept by the servants of Afrasyab, he slew the herdsman. Then Afrasyab himself came by to look on his horses and Rustam fought with him and put him to flight. After that the Div came on him again, but Rustam smote him with his mace and killed him (Wilkinson and Binyon, 1931: 41).

*Nizami, illustrated manuscript by the painter of Herat, Bihzad, painted 1494. British Museum, London Or. 6810*

The genre scene "Construction of the castle of Khawarnaq" is depicted in a realistic manner (Fig. 7.31) showing the labourers, the building ramp, ladders, scaffolding and other details of fifteenth century workmanship. The painter depicts all the details of construction work when erecting a high keel-shaped arch for an *ivan*, just as they are preserved in many ruins of that time (Fig. 7.25) and as they are still to be seen in religious buildings nowadays in the centre of the worship (Fig. 6.33). Whilst we do not possess contemporary literary sources concerning technical details of baked or mud brick construction, rare examples of miniatures like this one from the *Khamisa* of Nizami may serve to illustrate Wilber's (1955) study of construction in Islamic Iran.

## Summary of Timurid Art

### Architecture

The architecture of Central Asia in the fifteenth and sixteenth centuries is comprehended by the widely used term "Timurid art" (Pugachenkova, 1969–70: 15), which is conventional, but acceptable in that it locates a particular cultural phenomenon within the chronological limits of the reign of Timur and his successors and within the general territorial framework of an empire which covered what are now the Central Asian Republics of the USSR, Afghanistan and Eastern Iran. The architecture of the Timurid period reflects a great variety of historical and cultural influences in society, in everyday life, in religious architecture, in secular tasks, in building techniques and in aesthetics.

The tasks set for architecture were sometimes colossal. Government buildings, the chief mosque and the main markets, together with densely populated residential areas, were built in the *hissar*, the fortified part of a Timurid town (Fig. 7.17) where the citadel, or *qala*, was also sometimes situated (Fig. 7.3). Water was supplied by canals and underground conduits and stored in cisterns, *hauz* (Fig. 7.32), or covered reservoirs (*sirdab*), and there was a system of sewage disposal.

The man who played the most important part in building operations was the architect, *mimar*, who had to be widely informed about the various technical and decorative aspects of architecture. He occupied a relatively high position in society; miniature paintings show his work in progress (Fig. 7.31).

New inventions were made in building techniques, especially in the art of vaulting.



**Fig. 7.30:** History of Rustam and Divakwan, illustration from a manuscript of Firdausi's *Shah-nama*, written and illustrated for Muhammad Juki. Royal Asiatic Society.

Cupolas—single, double or triple, the outer shells of which were usually of different shapes, frequently cylindrical (Fig. 7.27), while the inner were of a gently curving elliptical form (Fig. 7.26)—were supported by pendentives of various sorts: from traditional forms, coffered consoles, corbelled arches and beam pendentives, to previously unknown systems of shield-shaped pendentives and intersecting supporting arches (Fig. 7.20). The most novel invention of Timurid architecture was the so-called double dome. It prescribes an inner dome, which has the incidental advantage of bringing the ceiling into good relation with the chamber below





Fig. 7.31: Bihzad, construction of the castle of Khawarnaq, from an illustrated manuscript of Nizami. British Museum.

and which, by assisting the drum to support a ring of radial buttresses, provides the swelling curve of the outer dome. The master builders reached a perfect harmony between a well-proportioned interior (Figs 7.20, 7.26) and a tower-like exterior, the latter sometimes striking by its severe outline relieved by decorative work (Fig. 7.27), sometimes attracting the eye by a ribbed dome (Fig. 7.28) based upon models from Samarkand.

Technical and artistic perfection was reached in the use of tile decorations with glazed, coloured bricks on a background of unglazed bricks, polychrome (two to seven colours) faience on a ceramic background or finely drawn, multicoloured mosaic (Figs 7.21, 7.27). Frescoes were also used as a form of interior decoration. Timur and his successors had their palaces embellished with various pictures.



Besides the great Friday Mosques (Figs 6.33, 7.24), there were suburban mosques and the so-called "Guzar" mosques of the various quarters of a town (Fig. 7.22). In the great central mosque during Timurid times extraordinary varieties of designs, architectural forms and decorative details appear, all on a colossal scale. The building took the form of a closed rectangle with an entrance porch, a great courtyard surrounded by arcades, with four vaulted *ivans* on the sides (Fig. 6.33) and a domed building on its main axis; the principal *ivan* and sometimes the corners of the mosque were flanked by minarets (Fig. 7.24). In some cases, a commemorative mosque is a kind of small three/four-domed gallery attached to the mausoleum (for example, at Kohsan, Fig. 7.27); in others it is a building standing alone with its *ivan* overshadowing, as it were, the sepulchre in front of it (Fig. 7.28).

The art of laying out gardens and parks, an important sector of the science and practice of architecture, agricultural technology and irrigation, reached an unprecedented level of development. Descriptions of the Timurid gardens at Samarkand, Herat and Kabul praise the type of Charbagh on the strictly regular geometrical plan.

Timurid artists from Herat may even have contributed to certain developments of Indo-Muslim architecture in the early period of Agra. In the manuscript of the *Maathir-i Rahimi* in the Cambridge University Library is a reference to one Ustad Hirawi, i.e. an artist from Herat, whom Maulana Wahshi Yazdi praises as one of the outstanding master builders of his time.

Finally, extraordinary tomb types have recently been discovered in the Dasht-i Nawar to the west of Ghazni, possibly belonging to the period of the Timurid tomb of Shah Shahid at Ghazni. A simple tomb on an octagonal ground plan, it is a massive structure of mud, with a dome in baked bricks (Fussman, 1974b: Fig. 30); the so-called tomb of Tala Begum (Fussman, 1974b: Fig. 31) consists of nine upright, rectangular baked brick fields decorated by chequer boards, crosses, bonds and serrated bricks ending in a beehive summit.

## Sculpture

Sculpture is preserved in tombstones, for example in the compound of Khwaja Abdallah Ansari at Gazur Gah (Sourdell-Thomine, 1973: Fig. 325), datable to the third quarter of the fifteenth century by a stylistic comparison with a tombstone in the Isabella Stewart Gardner Museum at Boston and with the colonettes of the southwest *ivan* of the Friday Mosque at Isfahan: all these memorials were attributed to the famous workshops of the Herat school of stone carvers (Erffa, 1946, 187). The designs are mainly based on the tree of life set within a horseshoe arch. The central stem of the tree is broken up into a succession of composite palmettes from which stem most of the branches. Realistic flowers with their origin in the Far East and abstract Iranian patterns are welded into a harmonious whole.

## Painting

Painting in Timurid manuscripts, together with its attendant bibliophile arts of illumination

in gold and metal pigments, of book binding, paper-making and, naturally, the art of calligraphy (Habibi, 1969-70: 12), is one of the recognized high-water marks of artistic achievement in the Islamic world. Recently, new research has been started in manuscript libraries which may help to explain the origin and diffusion of the Imperial Timurid style of painting (Sims, 1974: 58). Twice the Timurid court of Herat played an important role in the art of Islamic painting: under the patronage of the rulers of the early fifteenth century and towards the end of that century when the master Bihzad flourished.

Two sons of Shah Rukh, Baysunghur and Ibrahim, were lovers of Persian literature, and the former was himself a good calligrapher and prepared a new edition of the *Shah Namah* at Herat. The reputed date of the foundation of his library is 1420; Jafar became the head of this most famous scriptorium of the day. In a manuscript of *Khusrau and Shirin*, 1421, he already signs himself al-Baysunghuri (Gray, 1961: 84). In 1427 a second master calligrapher, Muhammad b. Husam, produced two beautiful small books, an *Anthology* and the *Gulistan* of Sadi. The most sumptuous manuscript produced in Prince Baysunghur's library is the copy of the *Shah Namah* by Jafar Baysunghuri, 1430, now in the Gulistan Palace at Teheran. Baysunghur, who was considered the greatest connoisseur of his generation, died of dissipation in 1433. Under the patronage of his son, Ala al-Dawla, who survived until 1447, Ghiyath al-Din came to Herat, a painter who had accompanied the embassy of Shah Rukh to China (1419-1422) as the envoy of his son Baysunghur. Ala al-Dawla's uncle, Muhammad Juki, was another patron of the arts; a finely illustrated manuscript of the *Shah Namah* which was made for him survives in the library of the Royal Asiatic Society (Fig. 7.30).

After a period of puritan domination, Herat slowly recovered its artistic life (Gray, 1961: 109). With Sultan Husain Baiqara in 1468 begins a better literary record of names and careers of artists, from sources so nearly contemporary that they must be accepted as at least approximately true: Shah Muzaffar; Mirak the painter, calligrapher, illuminator and miniature painter, chief of the library of Sultan Husain and, above all, teacher of Bihzad. Of the masterworks of this last-mentioned eminent painter, who found the means of strengthening the structural forms of his miniatures and thus of heightening their emotional tension, the most important, the *Bustan of Sadi* of 1488-1489, is now in the Egyptian library in Cairo. Three minatures in this Cairo *Bustan* are exercises in architectural composition, two showing mosque interiors and the third Pharaoh's palace, as a setting for the attempted beguiling of Yusuf by Zulaikha. There are two wonderful manuscripts of the *Khamsa* of Nizami in the British Museum. One is dated 1494 and its miniatures are for the most part notable for their rationalism and even their realism, compared with anything which went before. Whilst in the above-mentioned *Bustan* from the Cairo collection the artist excelled in creating an ideal architecture as background for legendary scenes, Bihzad renders an epic subject of Nizami, the construction of the castle of Khawarnaq (Fig. 7.31) realistically, enabling us to get an idea of the contemporary building technique, for instance the construction of keel-shaped arches as entrance to *ivan*-halls (Fig. 7.25).

All great manuscript libraries in East and West are proud to possess works of the Herat school, whilst in Afghanistan itself records of this cultural period are rare (A. Dupree, 1964: 60). Described recently were a variety of miniatures from the Timurid period, illustrations of an anthology of poems, supposed to be by the hand of Bihzad or his pupil Qasim

Ali; the manuscript is preserved in the Public Library of the Ministry of Culture and Information at Kabul (Husain Shah, 1972–3: 22).

### *Minor Arts*

Minor arts of the Timurid period are less known than architecture and painting (Grube, 1974: 233). Very little of the decorative arts of that age seem to have survived. Neither is there much reliable chronological information available on safely datable objects. Finally, no specific references are to be found in historical texts. There can be, however, no question that pottery, for example, was produced in large quantities as a luxury during the Timurid period. This is borne out by the appearance of numerous ceramic objects in paintings of the fifteenth century, many of which would appear to be of local manufacture rather than Chinese import, even though it is at times difficult (if not impossible) to distinguish between the two. Another reason to assume ample production of ceramic objects is to be found in the rich examples of tilework in Timurid architecture (Figs 7.27, 7.28). Of the types attributable to this period, that painted in black and blue on a white ground is the most securely established (Fehérvári, 1973: 126). Blue-and-white pottery seems to have been produced in all shapes and sizes, always however, following Chinese models very closely. Also, the black-and blue ware of the Kubatchi group was widespread. Metalwork consists primarily of small vases and ewers, and also small hemispherical bowls. There are no figurative representations; the floral motifs are small scale and abstract, and organized into continuous cartouche patterns. Some pieces have inscriptions giving date, artist and patron (Fig. 7.29). This ewer of Husain Baiqara can also be compared with a pre-Timurid basin in the Herat mosque (Fig. 6.33) made a generation before the Timurid cultural epoch, in 1375 (Melikian-Chirvani, 1969b). It shows clearly the background of this variety of Timurid minor arts. The basin, decorated with a large, beautifully designed arabesque relief in the lower bands and with two bands of inscriptions in cartouches in the upper part of the body, is quite similar in feeling to the large basin in the Hermitage, Leningrad, made for Timur in 1399 (Grube, 1966: Fig. 155). Both pieces have in common the size, the restraint in decoration, the use of relief and the epigraphic elements in design. Timurid precious metals, jades and jewellery count among the greatest rarities. Many of the trays and cups, the ewers and wine bottles depicted in Timurid paintings executed in gold, may well have been objects made of precious metals, and one may deduce a flourishing industry, supported by historical descriptions of Timurid courts. Rugs appear frequently in miniatures and, as one can be fairly certain of the accuracy of these representations, we are quite well informed about this particular art form (Briggs, 1940, 1946; Grube, 1974: 256). By far the largest number of rugs on miniatures are of geometric type. The field is based on an all-over repeat of squares, octagons, hexagons, stars or circles, combined in a variety of ways with geometric star rosettes and enriched by interlacements and other geometric, semi-geometric and stylized plant forms. With the exception of a very few rugs in miniatures attributed to Bihzad, where arabesque forms are used, the border is invariably composed of forms derived from Kufic inscriptions. Rugs decorated with floral patterns appear already in paintings before the middle of the fifteenth century and became very common in subsequent generations.

The spirit of Central Asian culture, reaching a summit in the Timurid art of Afghanistan, was also directed by various channels towards India. Mughal civilization in northern India also adopted another creation transmitted from Central Asia *via* Afghanistan by the founder of the Mughal empire himself: the art of the garden, now reflected only in some much altered remains of Babur's garden at Kabul. The only authentic features of the ancient Bagh-i Babur are the Emperor's grave and those of some relatives and Shah Jahan's mosque (Shepherd Parpagliolo, 1972). The parterre and the three fountains below the pavilion are much more



Fig. 7.32: Herat, Chahrsuk, covered reservoir.



reminiscent of European nineteenth century garden art than that of an Oriental garden going back to the early years of the sixteenth century, and the total lack of running water contradicts the idea of the Persian or the Central Asian garden park. Babur in his lifetime planted and built several gardens at Kabul or in its surroundings. All these gardens, including the Bagh-i Babur, belong to the Persian garden tradition that Babur, 14 years old, saw at Samarkand and Herat. There were all the elements of a Persian enclosed paradise: the shady trees, the channels of water and the jets springing out of flat pools, the awnings and tents, the platforms to erect them and spread the carpets to sit on, the pavilion in the centre and the magnificent gate at its entrance. All these features were composed on a strictly geometrical pattern on sloping ground, the central axis enhanced by canals flowing from terrace to terrace with waterfalls into the larger pools generally in front of a pavilion. The custom of stopping and camping in gardens when on a long journey became very much part of the way of life of the Mughal Emperors in India. Babur loved the gardens of Kabul and his wish to be buried there was fulfilled. His followers restored his garden and his simple tomb from time to time, but after the earthquake of 1842 the site fell into decay and only recently has repair work begun.

To conclude this survey of Islamic monuments in Afghanistan some structures of interest erected during the Mughal and Safavid periods must be mentioned. The Chihilzina (or Forty Steps) lead to a rock-cut chamber high above the plain at the northern end of the rugged chain of mountains to the west of Kandahar's Old City. The chamber contains an inscription of the year 928 A.H. (A.D. 1522) in which Babur records his conquest of Kandahar. At Balkh we find the Madrasa (college) of Sayyid Subhan Quli Khan, built in the seventeenth century. There exists the magnificent fragment of an arch, the interior of which is elaborately embellished with decorative motifs inherited from the Timurid period (N. H. Dupree, 1971: 295). Finally, the remains of a water reservoir of a once widespread type are fortunately preserved in the vicinity of the covered bazars of Herat, in a quarter which is named, after a central square, "Four Bazars" or "Chaharsuq" (N. H. Dupree, 1971: 186), a traditional crossroad of the main bazar streets. The cistern was built in 1634 by a Governor ruling for the Safavids of Persia. Architectural devices, seen in religious monuments of Afghanistan from Abbasid to Timurid times, have here been used for a traditional secular building of utilitarian purpose. The square ground plan of the cistern is transformed by alternating keel-arched squinches and kite-shaped pendentives into a polygon from which rises a dome (Fig. 7.32). An opening in the apex allows air to circulate and daylight to enter. Anyone who has travelled through the arid zones of eastern Iran, Afghanistan and northwest India and recognized how fresh water is a source of life will appreciate how the artistic mind has conceived a beautiful structure of practical function.

# Conclusion

*Raymond Allchin and Norman Hammond*

At the end of this fairly lengthy book the reader may be beginning to think that quite a lot is known about its subject, the archaeology of Afghanistan through the ages. It is, however, still necessary to qualify such an impression. First, although much is now known, it represents only a fraction of the wealth of material still available and awaiting investigation. When we compare the quantity and quality of the data from the adjacent regions, Iran, Soviet Central Asia, and India and Pakistan, with the exception of Baluchistan which remains as little explored as some of the remoter parts of Afghanistan herself, it will be seen that until much more work is done it is scarcely possible to begin discussion, in realistic terms, of many problems. Our contributors' chapters will have revealed how much is derived from very recent work, if not from their own field researches, and how much is still strictly speaking work in progress or as yet incompletely published. A third point is that to date the nature of the research has for all sorts of reasons, historical, practical and other, been restricted. For almost the whole prehistoric period it is necessary to generalize on the basis of single sites. For the historical period there has been hitherto greater emphasis on the discovery of palaces and religious centres, monasteries, temples or mosques, than upon the excavation of common settlements, so that we know far more about these special aspects, and less about the life, technology or economic affairs of the people. The current Italian excavations at Shahr-i Sokhta, in Iranian Seistan, show how far even a single well conceived inter-disciplinary research program can change this situation. In this concluding chapter we shall try to draw together what we see as underlying themes, and to point to some of the problems and areas which in our view remain insufficiently studied and demand elucidation by field research.

We began by referring to Afghanistan as the "cross-roads of Asia" (Caspani and Cagnacci, 1951). It has also recently been spoken of as an "interaction sphere" (Chakrabarti, 1976), following the usage of Caldwell (1964), and its extension to Iran (Caldwell, 1967; Lamberg-Karlovsky, 1972a) and Baluchistan (Shaffer, 1974b). We regard both these notions as valuable and useful in their own way, although both require qualification, particularly when the whole time-span of archaeology is taken into account. They complement each other rather than oppose. Reference to the history of the past two-and-a-half millennia suggests a recurrent pattern of movement along the routes of Afghanistan: by armies arriving to ravage or occupy lands, or setting out to ravage or occupy other lands, or merely in transit; by merchants and caravans, both trading locally, or more distantly, en route to or from Iran or the Mediterranean, India or China; by pastoral nomads in the course of their annual movements; by pilgrims or missionaries, whether Buddhist, Hindu, Christian or Muslim; or simply by travellers. Viewed

through their eyes Afghanistan may certainly be seen as a cross-roads, as a region through which men passed and which by virtue of its geographical position focussed the more obvious and easy means of land communication between the great civilizations of India, China and the West. But it would be erroneous to think of Afghanistan only in such a role, and to neglect the different view seen through the eyes of its own indigenous population. For this the second concept is the more valuable, as it permits us to look at Afghanistan's cultural individuality in terms of her own lands and people, and of their interactions with the travellers they encountered. If we may regard the recurring themes of the historical period as suggesting a model for those of the prehistoric, then we should find the historical pattern of trade and contact, both within the area and with the outside world, valuable as an indication of the pattern of earlier times. In this sense we regard as peculiarly relevant our aim of juxtaposing in a single volume the evidence of the historic and prehistoric periods; and we hope that it will serve to throw some light, if only still slight and tentative, upon the central theme of this book, the culture of the people of Afghanistan through the ages.

## The Palaeolithic

Our knowledge of the Palaeolithic of Afghanistan is still very limited. This is scarcely surprising when it is recalled that the earliest reported find of a stone tool, of the Middle Palaeolithic, is barely 25 years old (Allchin, 1954). Even now, for the better known periods, the volume of sites is still minimal and cannot be compared with the much more massive data available for Central Asia and India-Pakistan. On the other hand the climate of Afghanistan is such as to encourage men to live in caves where these are available, and such sites preserve much that has altogether disappeared from the numberless open sites of the latter countries with their more tropical climate. Indeed a tendency to live in caves appears to have been an enduring trait in Afghanistan in all periods.

As yet little can be said of the Lower Palaeolithic. It seems unlikely that anything of this period will be found north of the Hindu Kush, on the analogy of Soviet Central Asia and the northern parts of Europe. The situation is likely to have been different south of the mountains, where finds comparable with the Lower Palaeolithic of Sind and Baluchistan may be expected. The recent discoveries in the Dasht-i Nawar hold out hopes of a major advance in our knowledge when they are investigated. It is only with the adaptations to new and more challenging environments which must have occurred in Middle Palaeolithic times, and possibly combined with the opportunity provided by an amelioration of climate at that time, that men settled in the colder northern areas. Thus it is that a number of caves and rock shelters, mainly in the valleys of the Hindu Kush, provide evidence of groups of hunters of the Middle Palaeolithic, exploiting locally available resources, including sheep and goat. It is to be expected that such groups would show broad similarities of stone technology and culture with those known to have existed in the Zagros to the west and in the ranges to the north of the Oxus. A single radiocarbon date from the Dara-i-Kur cave of c. 30,000 B.C. gives an indication of the probable age of these sites, and corresponds with those of the Middle and Upper Palaeolithic of the Zagros. Although the Middle Palaeolithic of both the Zagros and

Central Asia is definitely associated with Neanderthal types of man, there is no clear evidence from our region on this point so far.

There is not as yet any evidence of a developmental link between the Middle Palaeolithic sites and those of the Upper Palaeolithic. Sites of the latter period are again found in northern Afghanistan, in the foothills of the Hindu Kush or on adjacent plains. They include both cave and open sites. At Kara Kamar III there is an early Upper Palaeolithic, generally comparable to the Baradostian of the Zagros. This is followed by an apparent hiatus in the occupational sequence of the whole region, possibly coinciding with a severe cold climatic phase after 25,000 B.C. Such an hiatus has been suggested for several regions in Eurasia.

At the conclusion of this hiatus there is evidence of fairly widespread activity in several parts of Afghanistan during the final stage of the Pleistocene and early Holocene. This "Epipalaeolithic" stage appears to correspond with the final stages of the Upper Palaeolithic and beginnings of the Mesolithic in the Indian subcontinent. There are suggestions of local cultural variations: Aq Kupruk II is particularly interesting in its faunal remains which show a marked preponderance of sheep and goat. It appears that the caves of the Hindu Kush were in some cases occupied right through into the subsequent "Neolithic", and that already at an early stage there sheep may have been domesticated. This suggests that there were varied local adaptations to environmental conditions; and that in Afghanistan, as in neighbouring regions, different transitions from hunting to subsistence agriculture were to be expected. The available radiocarbon dates are few: two from the Non-Ceramic Neolithic give 8566-6960 B.C.; while the Ceramic Neolithic appears to extend from 5214-2685 B.C. But, as Shaffer points out, the probability is that the initial domestication of sheep may have taken place in the caves of the northern region even prior to these periods.

Afghanistan lies to the east of the Levant-Kurdistan-Zagros region, the "Fertile Crescent", within which the bulk of the evidence for the beginnings of food production in Asia has so far been sought, and found. The evidence of the Aq Kupruk caves indicates that this zone of potential economic transformation stretched far across and beyond the Iranian plateau into the foothills of the Hindu Kush and Central Asian massif. It has recently been pointed out that the range of potential productive man-animal and man-plant relationships in Eurasia is far wider than the relatively restricted set involving sheep/goat/cattle/pig and wheat/barley, whose importance, in retrospect, can be seen in their successful adaptation in southwest Asia and subsequent spread into other regions as the basis of sedentary settlements (Higgs and Jarman, 1972). Afghanistan is still *terra incognita* in this respect, since the Aq Kupruk caves form a small, geographically localized and structurally specialized group. The location and investigation of open sites in other regions, in such potentially advantageous niches as the points of emergence of the major river valleys from the mountains into the southern lowlands, or the intermontane valleys such as those around Begram, might prove important.

## The Appearance of Sedentary Settlements

The evidence relating to the first appearance of sedentary settlements in Afghanistan is still very slight, and such as there is comes mainly from the southern lowlands. But some analogies



may be drawn from adjacent regions and comparison with Djeitun in southern Turkmenistan to the northwest, and with sites in Iran and Pakistan are all suggestive. In all these areas the earliest settlements seem to have exploited sheep, goat and cattle, and grown crops of wheat and barley; they began to construct houses of mud brick, and to develop alongside a stone blade industry, with occasional microlithic forms, the use of metal; among other common crafts was the making of pottery. For Afghanistan itself the evidence of Mundigak is still the main source of information, and there is a need for fuller excavations both here and at other sites as many questions remain to be answered. At Mundigak a series of periods of building, accompanied by developing technology and styles of ceramics, leads through to Period IV with its monumental architecture and massive defences. Although the chronology of these developments is still not firmly established, it may be fairly definitely stated that Period IV dates from the first half of the third millennium. One may point to the Italian excavations at Shahr-i-Sokhta, whose material culture shows many parallels with the south Afghan sites, and this has led to the suggestion for this culture of the name 'Halmand civilization' (Lamberg-Karlovsky and Tosi, 1973).

When we speak of this period as one of sedentary agricultural settlements, it is necessary to bear in mind that it must have witnessed the beginning of a form of cultural symbiosis that is characteristic till today of Afghanistan: the close inter-relations of sedentary agriculturalists and nomadic pastoralists. There are several indications of such a pattern at this time, and further research will probably bring more to light. Its significance for the development of trade and contact over longer distances also calls for investigation.

It must be born in mind that the picture of settlements in the southern lowlands cannot be used to generalize for other regions: the so called "Goat Cult" phase revealed in the Dara-i-Kur in the north, which on present showing may belong to the late third or early second millennium, suggests that cave dwellers probably with local specialist adaptations to pastoral nomadism still occupied the valleys. There are as yet few signs of sedentary occupation in the north, and by comparison with adjacent regions such settlements are mainly to be expected on the plains. The picture is still far from complete and was most probably complex, with numerous different local adaptations to various environments.

This period must have witnessed increasing social stratification with growing numbers of specialist occupations and craft groups. It must also have seen the establishment of far wider horizons of trade and contact than at any previous time. Such special items of trade as lapis lazuli, brought from the quarries of the northeast and worked in such centres as Shahr-i-Sokhta, before being dispersed in the course of trade to Mesopotamia or the Indus valley, may be called on to account for the presence of such luxury imports as those discovered in the Fullol hoard. The demand for such materials may also have led to traders and prospectors operating in areas remote from their home territories. This may provide an explanation of the recently published report of the discovery of a site in northern Afghanistan, near the Soviet border, having many of the characteristics of the Indus civilization (Lyonnet, 1977). Thus the second half of the third millennium marks the culmination of the period of early agricultural settlements, and may well be regarded as one of incipient urbanism.

Having said so much, we must be cautious in our use of the term "Helmand civilization". If the settlement pattern now emerging in southern Afghanistan actually produced cities, and

this has still to be demonstrated, it appears neither to have produced written records, nor some of the other accompaniments of civilization. The paucity of the known sites leads us to doubt whether anything strictly comparable with the urban societies of either Mesopotamia or the Indus actually developed in Seistan. Rather, it may be supposed, that the region received stimulus from its role as an entrepot between these other areas and that it developed cities of a different kind, trading centres or caravan cities, but falling short of the more complex networks of settlements and social and economic relations which constituted the cities of the great river valley cultures (Dales, 1976).

There is a dramatic break in the sequence at the close of this period. Periods V and VI at Mundigak both probably belong to the second millennium, and are suggestive of the time of upheaval and movement during which the Indo-Iranian speaking peoples moved southwards out of Central Asia into the Iranian plateau, and thence eastwards across Afghanistan and into India-Pakistan. The archaeology of this period is beginning to emerge from its "Dark Age" in both Iran (Young, 1967) and northwest India (Gaur, 1974; Suraj Bhan, 1975), and yet even in these areas the possibility of relating it to the reconstructed language history remains problematic (Allchin and Allchin, 1968: 321–325; Parpola, 1974). Afghanistan remains still without a sufficient factual basis of archaeological data, and we feel that it would be wiser to say little about this problem. For in a very real sense the end of the preceding period ushers in a Dark Age—succeeding centuries are still too obscure and the indications of external relations are too tenuous to allow us to draw inferences on their wider cultural significance.

It is strange that up to this time nothing comparable with the "Gandhara grave complex" of northern Pakistan has been found in northeast Afghanistan, since the valleys offer a very similar environment. The Pakistan graves appear to date from the middle of the second millennium to the early first millennium b.c., and therefore provide evidence of happenings there at just the time we are interested in. There are suggestions that the Gandhara graves show evidence of contact with the graves of the Caucasus and even Kurgan culture, and may therefore provide a link in the spread of the Indo-Iranian languages (Allchin, 1970; Dani, 1967: 49–55; Stacul, 1966, 1971 etc.; Tucci, 1963). It can be fairly confidently expected that exploration in the neighbouring valleys of northeastern Afghanistan will provide further evidence of graves of this period, and their exploration would be well worth while.

A closely related question concerns the appearance of iron smelting and working in Afghanistan. The first occurrence of iron at Mundigak (with a problematic exception) is in Period VI, and only in the subsequent Period VII does it become at all common. This leads us to expect for the latter period a date from the first millennium b.c. It seems that in the Gandhara graves iron is present in the later periods but not in the early, and it may well be that similar evidence will be found in Afghanistan. But this is still an area which requires field research and more facts before one can say much.

## The Beginning of History in Afghanistan

In a sense Afghanistan enters history with the Achaemenid period, yet only in a very tenuous way, since no inscription of the period has so far been found in Afghan territory, and coin finds

are still few and far between. It must be admitted that to identify settlements as "Achaemenid" without the aid of coins or inscriptions, and when few absolute datings are available, must necessarily be somewhat problematic. Once again we are faced with the necessity of looking to the better documented results of work in adjacent regions, Soviet Central Asia, Iran and Pakistan, in order to discover the typical architecture or material culture of the eastern provinces of the Achaemenids. There is however now the beginning of a picture: in the north the Russian work beyond the Afghan borders can be augmented with the Afghan-Soviet expedition's work in Bactria; in the south, in Seistan the earlier French excavations at Nad-i Ali can be augmented by the Italian work at Dahan-i Ghulaman across the border in Iranian territory; and in the east the recently started British excavations at Kandahar may be augmented by the excavations at Taxila and Charsada in Pakistan. It cannot be doubted that the extension of Achaemenid administrative control over the provinces of Aria, Bactria, Drangiana, Arachosia and Gandhara was of enormous significance in terms of renewing or establishing firm links with west Asia and the Mediterranean world; and in this context the possibility of the presence of Greek or even Phoenician trading communities as elements of the Achaemenid imperial structure deserves special investigation. How profound the influence may have been is indicated by the continuing use of Aramaic, the Achaemenid administrative language, even in the third century B.C., and in the continuing use of the Kharosthi script which must have been adapted from Aramaic for the writing of Indian phonetic forms during Achaemenid times.

The story of Alexander the Great's passage through Afghanistan in the course of his campaign of world conquest, and of the cities he established there, with their successor dynasties of Greek rulers in Bactria, and later in Kabul and India, was for long known almost only from the accounts of the classical historians. From the nineteenth century the discovery of coins of the Bactrian Greek rulers in various parts of the country gave numismatic demonstration of the historians' accuracy, but it is only in the past decade or so that archaeology has been able to add anything like substance to the history. The discovery of an altogether Greek city at Ai Khanum, and its continuing excavation by the French Delegation, has provided the most important new evidence so far: the city was founded either in Alexander's time or immediately thereafter, apparently on the eastern borders of the Bactrian kingdom, and continued to flourish for several centuries. It is to be hoped that the British excavations recently started at Kandahar may throw similar light upon a second city, the Alexandria in Arachosia, although here the existence of a city long before Alexander's time, and possibly even before the Achaemenid period, will add a different dimension. The recent discovery of edicts of Asoka in Greek and Aramaic translations at Kandahar is another find of outstanding importance for the historian, confirming the otherwise very tenuous evidence for Mauryan expansion into parts of eastern Afghanistan in the wake of Alexander's retreat from those regions. This otherwise obscure episode, too, may be clarified by the current excavations. For a fuller understanding of the Greek kingdoms more field research is certainly required, including excavation at such potentially important sites in the Bactrian area as Balkh or Qulm, and in the Paropamisus the excavation of Begram certainly deserves to be pursued. Such work may throw light upon the relations of the Greek communities to the indigenous population.

It is our hope that Mac Dowall's lucid treatment of the inscriptions and numismatic evidence will provide a basis for the reader to understand the potentials of this type of evidence for illuminating not only the political history, but also economic and social history. The presence of Indian, Greek and Persian coins, and their relationships to each other must reflect the complex and cosmopolitan character of Afghan trade at this period, and calls to mind the concept of the economic interaction sphere.

The recent discoveries have made possible an entirely new assessment of some of the longstanding questions of the archaeology of the region. The early history of Indian art and architecture must be reconsidered in its light. The nature of the Hellenistic tradition which lay behind the Gandharan school of sculpture, whether it derived mainly from the earlier presence of Greek artists working in the east, as Foucher maintained or whether it was primarily the result of later Roman influence, as Sir Mortimer Wheeler suggested, may be re-assessed. Strong support has now been given to Foucher's view, and we may envisage a continuing Hellenistic presence, producing various hybrid growths in course of time and no doubt continuing to be influenced by new developments from the Mediterranean world, but above all demonstrating the widespread "Philhellenism" of the Greek rulers or their Asiatic successors. This presence must also have continued to exert its influence on the territories beyond, and certainly strengthens the view that it may have contributed to the development of Indian art. For instance, the discovery of coins of Agathocles at Ai Khanum, bearing some of the oldest Indian Brahmi inscriptions known from Greek coins, along with representations of two deities who can only be identified as Vasudeva and Sankarshana, provide not only valuable confirmation for our knowledge of the development of early Vaishnavism in northwest India, but are by far the earliest representations of these deities, otherwise known only from inscriptions at so early a date.

From the second century B.C. a new process is observable in the historical records. The process itself was certainly not new, and was probably recurrent. Groups of barbarous peoples started to move down from the eastern parts of Central Asia and the frontiers of China into the more hospitable lands of Bactria, and thence to move southwards into the mountains and into northwest India. It is probable that the movement of the Indo-Iranian speaking peoples centuries earlier had taken a not too dissimilar form. The new movement is associated with the Yueh-chi who were probably a nomadic people speaking an Iranian language, driven from their earlier homelands by the Hiung-nu tribes, who must have been speakers of a Turki language and who may have been ancestral to the Hunas. By 128 B.C. the Yueh-chi had occupied the lands north of the Oxus. They gradually extended their control throughout Bactria, finally bringing to an end Greek rule there. One of the five groups into which they were divided were the Kushans and by the end of the first century B.C. they established control of all northern Afghanistan, following the pattern of succeeding peoples, of crossing the mountains, capturing Kabul, and thence invading northwest India. At its height, under Kanishka, the Kushans ruled a mighty empire, extending from the Ganges valley and Sind in the east and south to Kashgar in the northeast. Bactria and Kabul remained the pivotal points of the whole. During the second century A.D. this area was the centre of an interaction sphere whose scale and splendour must have rivalled that of Rome. The archaeology of all these developments is still far from clear, and confronts the student with all sorts of challenging opportunities. We



know virtually nothing of the relations of the invaders with the existing populations; we know little of the economic implications of the extensive luxury trade attested by finds such as the Begram treasure; much still has to be done to work out the cultural impact of the contacts with India, Rome and China of which they give evidence.

The centuries between the Achaemenid period and the climax of the Kushan empire form a time of peculiar interest, because we may feel the highly distinctive character of Afghan culture already emerging. The contact between the barbarous and nomadic peoples who arrived from Central Asia and the cultures they encountered—the Parthians and then Sasanians, representing Iran, the Indians and the Hellenized Indo-Greeks—produced a special amalgam. It produced a new cosmopolitan blend of all these elements, and it left a lasting mark upon the culture of all the regions it touched. Are we to think of it as being Iranian, Indian, Hellenistic, Kushan, or simply as Afghan? The Kushan coinage epitomizes the situation. Greek, Iranian and Indian religions all find expression in the deities on their coins. Since the time of Asoka Buddhist missionaries spread into Afghanistan on their way to Central Asia and China. The art and architecture of Buddhism formed a major influence along the routes they followed. The dynastic shrine at Surkh Kotal, probably the counterpart of the shrine at Mat near Mathura, is a striking product of the major influences at work. So too is the developing Gandharan style of architecture and sculpture. At the same time we must feel somewhat perplexed by the lack of knowledge regarding the everyday life of the ordinary people, and the varieties of life styles involved: we know something, for example, of cities and towns, but we know very little about the details of life; we know even less about the villages or isolated settlements, let alone of the nature of the people who continued to live in caves such as Shamshir Ghar. In all these respects archaeology has still much work to do before we can understand the full meaning of the culture of this period.

After the break up of the greater Kushan empire Kushan rulers continued to control more limited areas in many parts. The twin processes, of the arrival of groups of nomadic peoples, mainly from the north, and their becoming absorbed into the cosmopolitan culture already existing in Afghanistan seems to have continued. In this way we can trace the arrival of the later Kidara Kushans, the Hephthalites, and the western Turks. All three of these groups seem to have shared much in terms of their cultural ancestry, even if they spoke different languages. They seem to have established for themselves dominion over the peoples they encountered. It is probable that it was in kingdoms of this kind that the great Buddhist complex at Bamiyan was constructed, with its neighbouring fortress or palace at Shahr-i-Zohak; or the little monastery at Fondukistan; or the interesting Buddhist complex at Tapa Sardar. In all such instances we see the same process of amalgamation of Indian, Iranian and even Hellenistic traits still at work, producing equally rich results in architecture, sculpture and painting.

## The Arrival of Islam

During the seventh century A.D. a series of raids by Arab expeditionary forces penetrated Iran and Afghanistan. For the latter they culminated in the campaigns of Qutaiba at the beginning of the eighth century, and from that time forward we must think of Afghanistan as within the

embrace of Islam, even though there were areas and pockets, particularly in the mountains of the north, but even in the centre and the south, where the old religions lingered on for centuries. The last such pocket was in Kafiristan where the old religion has survived into our own time. What religious conversion meant to the people of Afghanistan in cultural terms has still to be determined. The archaeology of the Muslim period is still in its infancy. In many areas, particularly in Seistan, a great deal of evidence survives from which it would be possible to study settlements and the pattern of settlement in their entirety. The work of the German expedition reported in Chapter 7 is a start in this direction. It is not unexpected that so far the greater interest has been in the study of the major surviving monuments, be they palaces, tombs or mosques. Yet even so no history of the Muslim architecture of Afghanistan has hitherto been written, and Fischer's chapters are in this respect also a pioneer attempt.

The oldest Muslim monument so far identified is the Abbasid mosque recently discovered in the suburbs of Balkh. This should belong to the first phase of Muslim building activity, and date within a century or two of the conquest of Balkh by the Arab armies in A.D. 671. Its style supplies new links with west Asia and stands as a so far unique monument to Arab penetration into Afghanistan.

From the eleventh century onwards we have a much greater volume of material and evidence of a succession of broad styles which may largely be associated with, if not actually named after, the dynasties who were their chief promoters. The first such style is linked with the Ghaznavids of the eleventh and early twelfth centuries. Buildings are found in many areas which may be ascribed to this period. The complex of palaces and associated town at Lashkari Bazar and the neighbouring Qala-i-Bust are of outstanding interest. The architectural style shows principally influences from Iran and Central Asia. A characteristic feature is that both burnt and unburnt brick is used, and that brick provided by far the most common building material. Carved marble occurs used architecturally. The palaces too contain traces of rich mural paintings. The subject matter of the carvings and paintings was not limited to inscriptions or geometric and plant designs, but also included representations of men and animals. Another special form of the Ghaznavid style was the Minaret or tower, the latter perhaps influenced by the victory towers which Mahmud saw on his victorious campaigns in India. Among other aspects of the Ghaznavid material culture mention must be made of the beautiful glazed wares, with clear links to the Samanid wares of Central Asia. As yet regrettably little is known of the other crafts which must have flourished at this time.

During the twelfth and early thirteenth centuries the short lived Ghorid kingdom witnessed the creation of a new style of architecture, developing from the Ghaznavid, and showing broadly similar influences. The recorded monuments of this period are once again mainly palaces, fortresses or minarets, and there is as yet very little information about the size or features of the settlements, or life of the common people. It is only with the surveys of Fischer and his colleagues that a beginning has been made on this sort of study, and it is to be hoped that with the progress of this work it will become possible to obtain a clearer view of the various monuments in relation to the functioning society of which they were once a part. As yet many aspects of the material culture are only vaguely known. The rich glazed wares, principally *sgraffiato*, the imports of luxury lustre wares, etc., have still to be properly described.

The Mongol invasions of the early thirteenth century are known to us primarily from the accounts of historians, and archaeology has still to lend confirmation to much of their reports. This appears to be another very fruitful field, rich in potential, to check systematically the evidence from major towns or cities which are reported to have been destroyed at that time, and try to ascertain the extent of the damage and of the subsequent depopulation. It has been suggested that the Mongol campaigns were aimed at the destruction of the irrigation systems so as to end the agricultural productivity of these otherwise arid areas in the interests of reverting to pastoralism. It would therefore be of great interest to try to discover how far this aim was successful, how far the irrigation systems were destroyed, and if so, how long it took to restore them thereafter. In the same way, the study of the succeeding period, under the Ilkhans and Karts, should help to show the nature of the reconstruction and repopulation of devastated areas. A fresh contribution along the lines pursued by the German expedition in Seistan is likely to yield equally impressive results.

The Timurid period (1370–1506) marks the culmination of the artistic and cultural achievements of Afghanistan after the advent of Islam. The architecture of this period again reflects predominantly Iranian and Central Asian influences and the use of glazed tiles, particularly blue, is a prominent feature. With the shift of the capital from Samarkand to Herat, western Afghanistan came to hold a position of unrivalled importance. The survival of so many monuments at Herat and elsewhere, and of so many products of the workshops of Herat, illuminated manuscripts and paintings, jade carvings, metal work, pottery and carpets, means that it is already possible to construct a far fuller picture of these things than for any earlier period. At the same time the need for archaeological study of monuments and settlements with a view to obtaining a fuller view of the life of the society, its economic and technological aspects, remains. The archaeologist need not shrink from the study of this splendid period because of its recentness, nor the comparative wealth of its historical documentation. In the context of Afghanistan there is still a great wealth of material awaiting discovery and study, and a major contribution to make.

The establishment in this region of barren mountains and deserts, and of valleys of incredible lushness, of the capital of one of the most intellectually and artistically dynamic courts in both Asia and Islam, is a fitting apogee to the long history we have been reviewing. Afghanistan has acted as a crossroads, melting-pot and caravanserai between three major areas of cultural innovation in western, central and south Asia, and taking and blending elements and influences from all of them and from yet more distant regions, it has emerged as an important zone of interaction and development in its own right. What has been accomplished in elucidating the archaeology of Afghanistan is still dwarfed by the magnitude of what remains to be done, but from the answers that we have already we know that the remaining questions are important ones, and that the discoveries of the years ahead are likely to be not less dramatic than those of the past.

# Bibliography

*Abbreviations:* The following are used in this bibliography.

MDAFA	<i>Memoires de la Délégation Archéologique Française en Afghanistan</i>
JA	<i>Journal Asiatique</i>
BEFEO	<i>Bulletin de l'École française d'extrême orient</i>
BSOAS	<i>Bulletin of the School of Oriental and African Studies, London University</i>
CRAI	<i>Comptes-rendus de l'Académie des Inscriptions et Belles-lettres</i>
JN	<i>Journal Numismatique</i>
JASB	<i>Journal of the Asiatic Society of Bengal</i>
JNSI	<i>Journal of the Numismatic Society of India</i>
ZDMG	<i>Zeitschrift der Deutschen Morgenländischen Gesellschaft</i>
NC	<i>Numismatic Chronicle</i>
JRAS	<i>Journal of the Royal Asiatic Society</i>
JRGS	<i>Journal of the Royal Geographical Society</i>
AAH	<i>Acta Antiqua Academiae Scientiarum Hungaricae</i>

- Adriani, A. 1955. Segnalazioni alessandrine: Le scoperte di Begram e l'arte alessandrina. *Archeologia Classica*, Vol. 7, 124–138. Rome.
- Adriani, A. 1959. *Divagazioni intorno ad una coppa paesistica del Museo di Alessandria*. Rome.
- Al'baum, L. I. 1960. *Balalyk Tepe*. Tashkent.
- Alessio, M., Bachechi, F. and Cortesi, C. 1967. University of Rome carbon-14 dates, V. *Radiocarbon*, Vol. 9, 360–362.
- Allchin, B. and Allchin, R. 1968. *The Birth of Indian Civilisation*. Harmondsworth.
- Allchin, F. R. 1953. A flake-tool from the Oxus. *Proceedings of the Prehistoric Society*, Vol. 19, 227. Cambridge.
- Allchin, F. R. 1957. The culture sequence of Bactria. *Antiquity*, Vol. 31, 131–141. London. (Reprinted in *Afghanistan*, Vol. 15, No. 1. 1–20. 1960.)
- Allchin, F. R. 1970. A pottery group from Ayun, Chitral. *BSOAS*, Vol. 33, 1–4. London.
- Angel, J. L. 1972. A middle paleolithic temporal bone from Darra-i-Kur, Afghanistan. In: *Prehistoric Research in Afghanistan (1959–1966)*, ed. L. Dupree, 54–56. Transactions of the American Philosophical Society, Vol. 62, Pt. 4. Philadelphia.
- Aubin, J. 1969. L'Ethnogénèse des Qaraunas. *Turcica*, Vol. 1, 65–94. Paris.
- Auboyer, J. 1968. *L'Afghanistan et son art*. Prague.
- Audouin, R. and Bernard, P. 1973. Trésor de monnaies Indiennes et Indo-Grecques d' Aï Khanoum (Afghanistan). I: Les monnaies Indiennes. *Revue Numismatique*, 6th Series. Vol. 15, 238–289. Paris.
- Audouin, R. and Bernard, P. 1974. Trésor de monnaies Indiennes et Indo-Grecques d' Aï Khanoum (Afghanistan). II: Les monnaies Indo-Grecques *Revue Numismatique*, 6th Series. Vol. 16, 6–41. Paris.



- Bader, N. O. 1970. Mezolit. In: *Kamenniy vek Na Territorii S.S.S.R.*, 90–104. Moscow.
- Barger, E. and Wright, P. 1941. *Excavations in Swat and Exploration in the Oxus territories of Afghanistan. A detailed report of the 1938 expedition*. Memoirs of the Archaeological Survey of India, 64. Delhi.
- Barnett, R. D. 1968. The art of Bactria and the Treasure of the Oxus. *Iranica Antiqua*, Vol. 8, 34–53. Leiden.
- Barrett, D. 1957. Sculptures of the Shāhi period. *Oriental Art*, n.s. Vol. 3, 54–59. London.
- Barrett, D. 1962. Bronzes from northwest India and western Pakistan. *Lalit Kalā*, Vol. 11, 35–44. New Delhi.
- Barth, F. 1961. *Nomads of South Persia*. Boston.
- Barthold, W. 1937. *Herat unter Husein Baiqara, dem Timuriden*. Leipzig.
- Barthold, W. 1968. *Turkestan Down to the Mongol Invasion*, ed. C. E. Bosworth. London.
- Barthoux, J. 1930. *Les fouilles de Hadda, III, Figures et figurines*. MDFA, Vol. 6. Paris-Brussels.
- Bar-Yosef, O. 1970. *The Epi-Paleolithic Cultures of Palestine*. Ph.D. dissertation, Hebrew University. Jerusalem.
- Basham, A. L. 1968 (Ed.) *Papers on the Date of Kaniska*. Leiden.
- Bayley, E. C. 1861. Observations on some double struck coins of the Bactrian King Azes or Azas N.C., Vol. 1, 72–78. London.
- Beal, S. 1906. *Buddhist Records of the Western World*. London.
- Behrens, H. and Klinkott, M. 1973. Das Ivan-Hofhaus in Afghanisch-Sistan. *Archäologische Mitteilungen aus Iran*, Vol. 6, 230–252. Berlin.
- Belenitskiy, A. M. 1968. *Asie Centrale*. Geneva.
- Belenitskiy, A. M. 1973. *Monumental'noe iskusstvo Pendzhikenta: Zhivopis', Skul'ptura*. Moscow.
- Belenitskiy, A. M. and Marshak, B. I. 1971. L'art de Piandjikent à la lumière des dernières fouilles (1958–1968). *Arts Asiatiques*, Vol. 23, 3–39. Paris.
- Bellew, H. W. 1839. *Afghanistan and the Afghans*. London.
- Benveniste, E. 1961. Inscriptions de Bactriane. *JA*, Vol. 249, 113–152. Paris.
- Benveniste, E. 1964. Édits d'Asoka en traduction grecque. *JA*, Vol. 252, 137–157. Paris.
- Benveniste, E. and Dupont-Sommer, A. 1966. Une inscription Indo-Araméenne d'Asoka provenant de Kandahar (Afghanistan). *JA*, Vol. 254, 437–465. Paris.
- Bernard, P. 1964. Les fouilles de Kohna Masdjid. *CRAI*, 1964, 212–221. Paris.
- Bernard, P. 1967a. Deuxième campagne de fouilles d'Aï Khanoum en Bactriane. *CRAI*, 1967, 306–324. Paris.
- Bernard, P. 1967b. Aï Khanum on the Oxus: A Hellenistic city in Central Asia. *Proceedings of the British Academy*, Vol. 53, 71–95. London.
- Bernard, P. 1968a. Troisième campagne de fouilles à Aï Khanoum. *CRAI*, 1968, 263–279. Paris.
- Bernard, P. 1968b. Chapiteaux corinthiens hellénistiques d'Asie Centrale découverts à Aï Khanoum Syria, Vol. 45, 111–151. Paris.
- Bernard, P. 1969. Quatrième campagne de fouilles 1969 à Aï Khanoum. *CRAI*, 1969, 313–355. Paris.
- Bernard, P. 1970a. Campagne de fouilles 1969 à Aï Khanoum en Afghanistan. *CRAI*, 1970, 301–349. Paris.
- Bernard, P. 1970b. Sièges et lits en ivoire d'époque hellénistique en Asie Centrale. *Syria*, Vol. 47, 327–343. Paris.
- Bernard, P. 1971. La campagne de fouilles de 1970 à Aï Khanoum. *CRAI*, 1971, 385–452. Paris.
- Bernard, P. 1972. Fouilles d'Aï Khanoum, campagnes de 1971. *CRAI*, 1972, 605–632. Paris. (Also printed in *Afghanistan*, Vol. 26, No. 2, 51–78. Kabul 1973.)
- Bernard, P. 1974a. Fouilles d'Aï Khanoum, campagnes de 1972 et 1973. *CRAI*, 1974, 280–308. Paris.

- Bernard, P. 1974b. Les noms anciens de Qandahar. *Studia Iranica*, Vol. 3, 171-185. Paris. (Reprinted in *Afghanistan*, Vol. 28, No. 1, 1-15. Kabul 1975.)
- Bernard, P. 1975a. Fouilles d'Aï Khanoum, campagne de 1974. *CRAI*, 1975, 167-197. Paris.
- Bernard, P. 1975b. Trésor d'Aï Khanoum. Note sur la signification historique de la trouvaille. *Revue Numismatique*, 58-69. Paris.
- Bernard, P. 1976. Campagne de fouilles 1975 à Aï Khanoum. *CRAI*, 1976, 287-322. Paris.
- Bernard, P., Desparmet, R., Gardin, J.-C., Gouin, P., Lapparent, A. de., Le Berre, Marc., Le Rider, G., Robert, L. and Stucki, R. 1973. Fouilles d'Aï Khanoum, I. (Campagnes 1965, 1966, 1967, 1968). *MDAFA*, Vol. 21, Paris.
- Bernard, P. *et al.* 1976. Fouilles d'Aï Khanoum: campagne de 1974. *BEFEO*, Vol. 63, 5-51. Paris.
- Binford, L. R. 1968. Post-Pleistocene adaptations. In: *New Perspectives in Archaeology*, ed. L. R. Binford and S. R. Binford, 313-341. Chicago.
- Biscione, R. 1973. Dynamics of an early South Asian urbanisation: the first period of Shahr-i Sokhta and its connection with southern Turkmenistan. In: *South Asian Archaeology*, ed. N. Hammond, 105-118. London.
- Biscione, R., Bulgarelli, G. M., Costantini, L., Piperno, M. and Tosi, M. 1974. Archaeological discoveries and methodological problems in the excavations of Shahr-i Sokhta, Seistan. In: *South Asian Archaeology*, 1973, ed. J. E. van Lohuisen-de Leeuw and J. M. M. Ubahgs, 12-52. Leiden.
- Bivar, A. D. H. 1954. The inscriptions of Uruzgan. *JRAS*, 1954, 112-118. London.
- Bivar, A. D. H. 1955. Bactrian Treasure of Qunduz *Numismatic Notes and Monographs of the Numismatic Society of India*, No. 3. Bombay.
- Bivar, A. D. H. 1956. The Kushano-Sassanian coin series. *Journal of the Numismatic Society of India*, Vol. 18, 13-42. Bombay.
- Bivar, A. D. H. 1963. The Kaniska dating from Surkh Kotal. *BSOAS*, Vol. 26, 498-502. London.
- Bivar, A. D. H. 1966. Seljuqid *ziyarat*s of Sar-i Pul (Afghanistan). *BSOAS*, Vol. 29, 57-63. London.
- Bivar, A. D. H. 1976. The Kusana trilingual. *BSOAS*, Vol. 39, 333-340. London.
- Bombaci, A. 1957. *Ghazni East and West*, Vol. 8, 247-259. Rome.
- Bombaci, A. 1959. Introduction to the excavations at Ghazni *East and West*, Vol. 10, 3-22. Rome.
- Bombaci, A. 1962. *Encyclopedia of World Art*, Vol. 6, 299-311. New York.
- Bombaci, A. 1966. *The Kufic Inscription in Persian verses in the Court of the Royal Palace of Masud III at Ghazni*. Rome.
- Bordes, F. 1968. *The Old Stone Age*. London.
- Bosworth, C. E. 1961. The early Islamic history of Ghur. *Central Asiatic Journal*, Vol. 6, 116-133. The Hague, Wiesbaden.
- Bourgeois, J. and D. 1971. Les Inscriptions et Dessins Rupestres de la Vallée du Laghmân. *Afghanistan*, Vol. 24, No. 2 and 3, 52-59. Kabul.
- Braidwood, R. 1957. Jericho and its setting in Near Eastern history. *Antiquity*, Vol. 31, 73-81. Ashmore Green, Newbury.
- Brice, W. C. 1966. *South-West Asia*. London.
- Briggs, A. 1940. Timurid carpets. I: Geometric carpets. *Ars Islamica*, Vol. 7, 20-54. Ann Arbor.
- Briggs, A. 1946. Timurid carpets. II: Arabesque and flower carpets. *Ars Islamica*, Vol. 11-12, 146-158. Ann Arbor.
- Bryson, R. A. and Baeris, D. A. 1967. Possibilities of major climatic modifications and their implications: Northwest India, a case for study. *Bulletin of the American Meteorological Society*, Vol. 48, 136-142. Lancaster, Pennsylvania.
- Bühler, J. G. 1898. On the origin of the Indian Brāhma alphabet. *Indian Studies*, (2nd edn.) no. iii. Strasbourg.

- Bulatova, V. A. 1972. *Drevnyaya Kuva*. Tashkent.
- Burnes, A. 1833. On the colossal idols of Bamian. *JASB*, Vol. 2, 561–564. Calcutta.
- Burnes, A. 1839. *Travels into Bukhara*. London.
- Bussagli, M. 1956–7. Osservazioni sulla persistenze delle forme ellenistiche nell'arte del Gandhāra. *Rivista dell'Istituto Nazionale di Archeologia e Storia dell'Arte*, Vol. 5–6, 149–247. Rome.
- Bussagli, M. 1963. *La peinture de l'Asie Centrale*. Geneva.
- Butzer, K. W. 1961a. Climatic change in arid regions since the Pliocene. In: *A History of Land Use in Arid Regions*, ed. L. D. Stamp, 31–53. UNESCO, Paris.
- Butzer, K. W. 1961b. Paleoclimatic implications of Pleistocene stratigraphy in the Mediterranean area. *Annals of the New York Academy of Sciences*, Vol. 95, 449–456. New York.
- Caldwell, J. R. 1964. Interaction spheres in prehistory. In: *Hopewellian Studies*. Caldwell, J. R. and Hall, R. L. eds. Illinois State Museum, Scientific Papers Vol. 12, No. 6, 133–43.
- Caldwell, J. R. 1967. *Investigations at Tal-i-Iblis*. Preliminary Report No. 9. Springfield.
- Caley, E. R. 1972. Chemical examination of metal artifacts from Afghanistan. In: *Prehistoric Research in Afghanistan, 1959–66*, ed. L. Dupree, 44–50. Transactions of the American Philosophical Society, n.s., Vol. 62. Pt. 4. Philadelphia.
- Carl, J. 1959a. Fouilles dans le site de Shahr-i-Banu et sondages au Zaker-Tépé. *MDAFA*, Vol. 8, 59–81. Paris.
- Carl, J. 1959b. Le bazar de Begram. *MDAFA*, Vol. 8, 85–102. Paris.
- Carl, J. 1959c. Le fortin du Saka et le monastère du Guldara. *MDAFA*, Vol. 8, 13–18. Paris.
- Carl, J. and Hackin, J. 1959. Le monastère bouddhique de Tépé Marandjân. *MDAFA*, Vol. 8, 7–12. Paris.
- Casal, J.-M. 1961. Fouilles de Mundigak. *MDAFA*, Vol. 17. Paris.
- Casal, J.-M. 1964. *Fouilles d'Amri* Publications de la commission des fouilles archéologiques. Paris.
- Casal, J.-M. 1966. Nindowari, a Chalcolithic Site in South Baluchistan. *Pakistan Archaeology*, Vol. 3, 10–21. Karachi.
- Casal J.-M. 1969. *La civilisation de l'Indus et ses enigmes*. Paris.
- Casimir, M. J. and Glatzer, B. 1971. Šah-i Mašhad, a recently discovered Madrasah of the Ghurid period in Gargistan (Afghanistan). *East and West*, Vol. 21, 53–68. Rome.
- Caspani, E. and Cagnacci, E. 1951. *Afghanistan Crocevia dell'Asia*. Milano.
- Chaghatai, M. A. 1970. A fugitive architect. *Afghanistan*, Vol. 23, No. 1, 24–28. Kabul.
- Chakrabarti, D. K. 1977. India and West Asia—an alternative approach. *Man and Environment* Vol. 1, 25–38 Ahmedabad.
- Charlesworth, J. K. 1957. *The Quaternary Era*. London.
- Clark, J. G. D. 1969. *World Prehistory: a New Outline*. Cambridge.
- Coarelli, F. 1961. Nuovi elementi per la cronologia di Begram: Cinque recipienti bronzei in forma di busto. *Archaeologia Classica*, Vol. 13, 168–179. Rome.
- Coarelli, F. 1962. The painted cups of Begram and the Ambrosian Iliad. *East and West*, Vol. 13, 317–335. Rome.
- Coarelli, F. 1963. Su alcuni vetri dipinti scoperti nella Germania indipendente e sul commercio Alessandrino in Occidente nei Primi due Seculi dell'Impero. *Archeologia Classica*, Vol. 15, 61–85. Rome.
- Codrington, K. de B. 1944. A geographical introduction to the history of Central Asia. *JRGS*, 1944, 73–91.
- Codrington, O. 1911. Coins collected by Sir A. Henry McMahon, K.C.I.E. in Scistan. *JRAS*, 1911, 779–784. London.

- Coon, C. S. 1952. Excavations in Hotu Cave, Iran, 1951. A preliminary report. *Proceedings of the American Philosophical Society*, Vol. 96, 231-249. Philadelphia.
- Coon, C. S. 1957. *Seven Caves*. New York.
- Coon, C. S. and Ralph E. K. 1955. Radiocarbon dates for Kara Kamar, Afghanistan. *Science*, Vol. 122, 921-922. Washington.
- Cowley, A. (ed.) 1923. *Aramaic Papyri of the Fifth Century B.C.* Oxford.
- Crane, H. and Trousdale, W. 1972. Carved decorative and inscribed bricks from Bust. *Afghanistan*, Vol. 28 No. 2, 25-47. Kabul.
- Cressey, G. B. 1960. *Crossroads: Land and Life in Southwest Asia*. Chicago.
- Cunningham, A. 1879. Notes on the gold coins found in the Ahin Posh Tope. *PASB*, 1879, 205-212. Calcutta.
- Cunningham, A. 1894. *Coins of Mediaeval India, from the 7th Century Down to the Mohammedan Conquest*, London.
- Curiel, R. 1953. Le Trésor du Tépé Maranjan. In: *Trésors monétaires d'Afghanistan MDAFA*, Vol. XIV, 101-131. Paris.
- Curiel, R. 1954. Inscriptions de Surkh-Kotal. *JA*, Vol. 242, 189-197. Paris.
- Curiel, R. and Fussman, G. 1965. *Le Trésor Monétaire de Qunduz. MDAFA*, Vol. XX. Paris.
- Curiel, R. and Schlumberger, D. 1953. Le trésor de Mir Zakah. In: *Trésors Monétaires d'Afghanistan MDAFA*, Vol. XIV, 65-98. Paris.
- Dagens, B., Le Berre, M. and Schlumberger, D. 1964. Monuments préislamiques d'Afghanistan. *MDAFA*, Vol. 19. Paris.
- Dales, G. F. 1965. A suggested chronology for Afghanistan, Baluchistan and the Indus Valley. In: *Chronologies in Old World Archaeology*, ed. R. W. Ehrich, 257-284. Chicago.
- Dales, G. F. 1972. Prehistoric research in southern Afghan Seistan. *Afghanistan*, Vol. 25 No. 4, 14-40. Kabul.
- Dales, G. F. 1973. Archaeological and radiocarbon chronologies for protohistoric South Asia. In: *South Asian Archaeology*, ed. N. Hammond, 157-169. London.
- Dales, G. F. 1976. *Shifting trade patterns between the Iranian plateau and the Indus valley in the third millennium B.C.* Typescript presented at the Colloquium on "Le plateau iranien et l'Asie centrale des origines a la conquête islamique". 1-17.
- Dalton, O. M. 1905. *The Treasure of the Oxus with Other Objects from Ancient Persia and India*. London.
- Dani, A. H. 1965-6. Shaikhan Dheri excavation: 1963 and 1964 seasons. *Ancient Pakistan*, Vol. 2, 17-214. Peshawar.
- Dani, A. H. 1967. Timargarha and Gandhara grave culture. *Ancient Pakistan*, Vol. 3, 1-407. Peshawar.
- Dani, A. H. 1970-71. Excavations in the Gomal Valley. *Ancient Pakistan*, Vol. 5, 1-177. Peshawar.
- Dani, A. H. 1974. *Inter-relation of Iran and Pakistan: a new archaeological perspective*. Paper presented at IVth Annual Symposium on Archaeological Research in Iran, Teheran 1974. To be published in the *Proceedings*, by the Iranian Centre for Archaeological Research.
- Dar, S. R. 1973. *Ta hellenistika stoicheia stenarchitektonike ton Taxilor*. Thessaloniki.
- Davary, G. D. and Humbach, H. 1974. Ein weitere aramäo-iranische Inschrift der Periode des Asoka aus Afghanistan. *Abhandlungen der Akademie der Wissenschaften und der Literatur in Mainz, Geistes und Sozialwissenschaftlichen Klasse*, 1974 No. 1, 1-16.
- Davidson, J. L. 1972. Begram ivories and early Indian sculpture. In: *Aspects of Indian Art*, ed. P. Pal, 1-14. Leiden.
- Davis, R. S. 1972. *The late Paleolithic of northern Afghanistan*. Ph.D. dissertation. Columbia University, New York; filed in Butler Library.



- De Cardi, B. 1950. On the boundaries of Pakistan: recent exploration. *Journal of the Royal India, Pakistan and Ceylon Society*, Vol. 24, 52–57. London.
- De Cardi, B. 1965. Excavations and reconnaissance in Kalat, West Pakistan—the prehistoric sequence in the Surab Region. *Pakistan Archaeology*, Vol. 2, 86–182. Karachi.
- De Cardi, B. 1970. Excavations at Bampur, a third millennium settlement in Persian Baluchistan, 1966. *Anthropological Papers of the American Museum of Natural History* Vol. 51, Pt. 3, New York.
- Dhavalikar, M. K. 1971. A note on two Ganeśa Statues from Afghanistan. *East and West* Vol. 21, 331–336. Rome.
- Dupont-Sommer, A. 1970. Une nouvelle inscription araméenne d'Aśoka trouvée dans la vallée du Laghman, Afghanistan. *CRAI*, 1970, 158–173. Paris.
- Dupree, A., Dupree, L., Motamedi, A. A. 1964. *A Guide to the Kabul Museum*. Kabul.
- Dupree, L. 1952. The Pleistocene artifacts of Hotu Cave, Iran. *Proceedings of the American Philosophical Society*, Vol. 96, 250–257. Philadelphia.
- Dupree, L. 1958. Shamshir Ghar: historic cave site in Kandahar Province, Afghanistan. *Anthropological Papers of the American Museum of Natural History*, Vol. 46, No. 2. New York.
- Dupree, L. 1963. Deh Morasi Ghundai: a chalcolithic site in south-central Afghanistan. *Anthropological Papers of the American Museum of Natural History*, Vol. 50, Pt. 2. New York.
- Dupree, L. 1964. The 2500 mile revolution. *Scientific American*, Vol. 211, 40–43. New York.
- Dupree, L. 1967. The prehistoric period of Afghanistan. *Afghanistan*, Vol. 20 No. 3, 8–27. Kabul.
- Dupree, L. (ed.) 1972. Prehistoric research in Afghanistan (1959–1966). *Transactions of the American Philosophical Society*, Vol. 62, Pt. 4. Philadelphia.
- Dupree, L. 1973. *Afghanistan*. Princeton.
- Dupree, L. and Albert, L. eds. 1974. *Afghanistan in the 1970s*. New York.
- Dupree, L. and Davis, R. S. 1972. The lithic and bone specimens from Aq Kupruk and Darra-i-Kur. In: *Prehistoric Research in Afghanistan (1959–1966)*, ed. L. Dupree, 14–32. Transactions of the American Philosophical Society, Vol. 62, Pt. 4. Philadelphia.
- Dupree, L., Gouin, P. and Omer, N. 1971. The Khosh Tapa hoard from northern Afghanistan. *Archaeology*, Vol. 24, 28–34. New York.
- Dupree, L. and Howe, B. 1963. Results of an archaeological survey for Stone Age sites in North Afghanistan. *Afghanistan*, Vol. 8, No. 2, 1–15. Kabul.
- Dupree, L. and Kolb, C. C. 1972. Ceramics from Aq Kupruk, Darra-i-Kur, and Hazar Gusfand. In: *Prehistoric research in Afghanistan (1959–1966)*, ed. L. Dupree, 33–42. *Transactions of the American Philosophical Society*, Vol. 62, Pt. 4. Philadelphia.
- Dupree, L., Lattman, L. and Davis, R. S. 1970. Ghar-i-Mordeh Gusfand (Cave of the Dead Sheep): A new mousterian locality in North Afghanistan. *Science*, Vol. 167, 1610–1612. Washington.
- Dupree, N. H. 1971. *An historical guide to Afghanistan*. Kabul.
- Dyson, R. 1965. Problems in the relative chronology of Iran 6000–2000 B.C. In: *Chronologies in Old World archaeology*, ed. R. W. Ehrich, 215–256. Chicago.
- Edelberg, K. 1957. Fragments d'un stūpa dans le vallée du Kunar en Afghanistan. *Arts Asiatiques*, Vol. 4, 199–207. Paris.
- Edelberg, K. 1960. An ancient Hindu temple in Kunar. *Afghanistan*, Vol. 15, No. 3, 11–12. Kabul.
- English, P. W. 1966. *City and Village in Iran*. Madison.
- Erffa, H. von. 1946. A tomb stone of the Timurid period in the Gardner Museum of Boston. *Ars Islamica*, Vol. 11/12, 184–190. Ann Arbor.
- Fairservis, W. A., Jr. 1952. *Preliminary report on the prehistoric archaeology of the Afghan-Baluchistan areas*. American Museum Novitates, No. 1587, American Museum of Natural History. New York.

- Fairservis, W. A., Jr. 1956. Excavations in the Quetta Valley, West Pakistan. *Anthropological Papers of the American Museum of Natural History*, Vol. 45, Pt. 2. New York.
- Fairservis, W. A., Jr. 1959. Archaeological surveys in the Zhob and Loralai Districts West Pakistan. *Anthropological Papers of the American Museum of Natural History*, Vol. 47, Pt. 2. New York.
- Fairservis, W. A., Jr. 1961. Archaeological studies in the Seistan Basin of southwestern Afghanistan and eastern Iran. *Anthropological Papers of the American Museum of Natural History*, Vol. 48 Pt. 1. New York.
- Fairservis, W. A., Jr. 1971. *The Roots of Ancient India*. New York.
- Fehérvári, G. 1973. *Islamic pottery. A comprehensive study based on the Barlow Collection*. London.
- Fehérvári, G. 1974a. Some problems of Saljuk art *Colloquies on Art and Archaeology in Asia*, Vol. 4, 1-12. London.
- Fehérvári, G. 1974b. An octagonal shrine excavated at Ghubayra. *Art and Archaeology Research Papers*, Vol. 6, 35-40. London.
- Ferdinand, K. 1959. Les nomades. In: *La Géographie de l'Afghanistan*, by J. Humlum, 277-289. Copenhagen.
- Fischer, K. 1958a. Kandahar in Arachosien. *Wissenschaftliche Zeitschrift der Martin-Luther-Universität Halle-Wittenberg*, Vol. 7, 1151-1164. Halle.
- Fischer, K. 1958b. Gandharan sculptures from Qunduz and environs. *Artibus Asiae*, Vol. 21, 231-249. Ascona.
- Fischer, K. 1967. Alexandrópolis metrópolis Arachosías. Zur Lage von Kandahar an andverbindungen Iran and Indien. *Bonner Jahrbücher*, Vol. 167, 129-232. Bonn.
- Fischer, K. 1969. Preliminary remarks on archaeological survey in Afghanistan. *Zentralasiatische Studien*, Vol. 3, 327-408. Wiesbaden.
- Fischer, K. 1971. Historical, geographical and philological studies on Seistan by Bosworth, Daffinà and Gnoli in the light of recent archaeological field surveys. *East and West*, Vol. 21, 45-51. Rome.
- Fischer, K. 1973. Archaeological field surveys in Afghan Seistan 1960-1970. In: *South Asian Archaeology*, ed. N. Hammond, 131-155. London.
- Fischer, K. 1974 *Dächer, Decken und Gewölbe indischer Kultstätten und Nutzbauten*. Wiesbaden.
- Fischer, K. 1976. *Indische Baukunst islamischer Zeit*. Baden-Baden.
- Fischer, K., Morgenstern, D., Thewalt, V. (eds.) 1974-6. *Nimruz. Geländebegehungen in Sistan 1955-1973 und die Aufnahme von Dewal-i Khodaydad 1970*. 2 vols. Bonn.
- Flannery, K. V. 1969. Origins and ecological effects of early domestication in Iran and the Near East. In: *The Domestication and Exploitation of Plants and Animals*, ed. P. J. Ucko and G. W. Dimbleby, 73-100. London.
- Flury, S. 1918. Das Schriftband an der Türe des Mahmud von Ghazna (998-1030). *Der Islam*, Vol. 8, 214-227. Strasbourg.
- Flury, S. 1925. Le décor épigraphique des monuments de Ghazna. *Syria*, Vol. 6, 61-90. Paris.
- Foucher, A. 1942-7. La vieille route de l'Inde de Bactres à Taxila. *MDAFA*, Vol. 1, Pt. I, 1942; Pt. II, 1947. Paris.
- Francfort, H.-P. 1975. Un couvercle de pyxide indo-iranien du Musée de l'Université de Philadelphie (U.S.A.). *JA*, Vol. 263, 93-98. Paris.
- Fraser-Tytler, W. K. 1967. *Afghanistan: A Study of Political Developments in Central and Southern Asia* (3rd revised edn by M. Gillett). London.
- Fried, M. H. 1967. *The Evolution of Political Society*. New York.
- Fussman, G. 1966. Notes sur la topographie de l'ancienne Kandahar. *Arts Asiatiques*, Vol. 13, 33-57. Paris.
- Fussman, G. 1969. Une inscription Kharosthī à Hadda. *BEFEO*, Vol. 56, 5-9. Paris.

- Fussman, G. 1970. Inscriptions Kharosthī du Musée de Caboul. *BEFEO*, Vol. 57, 43-56. Paris.
- Fussman, G. 1974a. Documents Épigraphiques Kouchans. *BEFEO*, Vol. 61, 1-77. Paris.
- Fussman, G. 1974b. Ruines de la Vallée de Wardak. *Arts Asiatiques*, Vol. 30, 65-130. Paris.
- Fussman, G. and Le Berre, M. 1976. Monuments Bouddhiques de la Région de Caboul. I. Le Monastère de Gul Dara. *MDAFA*, Vol. XXII, 92-94. Paris.
- Gafurov, B. G. 1974. (Ed.) *Central Asia in the Kushan Period* (2 vols). Moscow.
- Gansser, A. 1964. *Geology of the Himalayas*. New York.
- Gardin, J.-C. 1957a. *Ceramiques de Bactres* *MDAFA*, Vol. 15, Paris.
- Gardin, J.-C. 1957b. Poteries de Bamiyan. *Ars Orientalis*, Vol. 2, 227-245. Ann Arbor.
- Gardin, J.-C. 1963. Lashkari Bazar II, Les trouvailles. Ceramiques et monnaies de Lashkari Bazar et de Bust. *MDAFA*, Vol. 18, Paris.
- Gardin, J.-C. and Gentelle, P. 1976. Irrigation et peuplement dans la plaine d'Ai Khanoum de l'époque achéménide à l'époque musulmane. *BEFEO*, Vol. 63, 59-99. Paris.
- Garrod, D. A. E. 1966. Comment. In: Transition from Mousterian to Perigordian: skeletal and industrial, by L. Pradel, *Current Anthropology*, Vol. 7, 33-50. Chicago.
- Garrod, D. A. E. and Bate, D. M. A. 1937. *The Stone Age of Mount Carmel*, Vol. 1. Oxford.
- Gerard, J. G. 1834. Memoir on the topos and antiquities of Afghanistan. *JASB*, Vol. 3, 321-332. Calcutta.
- Ghirshman, R. 1939. Fouilles de Nadi Ali dan le Seistan afghan. *Revue des arts asiatiques*, Vol. 13, 10-20. Paris. Also published as "Recherches préhistoriques dans le partie afghane de Seistan", *MDAFA*, Vol. 8, 39-48. Paris, 1959.)
- Ghirshman, R. 1946. Bégram. Recherches archéologiques et historiques sur les Kouchans. *MDAFA*, Vol. 12, Cairo.
- Ghirshman, R. 1948. Les Chionites-Hephthalites. *MDAFA*, Vol. 13, Cairo.
- Ghirshman, R. 1964. Suse. Campagne de fouilles 1962-1963. Rapport préliminaire. *Arts Asiatiques*, Vol. 10, 3-20. Paris.
- Göbl, R. 1960a. Zwei Neufunde in der Numismatik der Kuschan. *Mitteilungen der Österreichischen Numismatischen Gesellschaft*, Vol. XI, 94-96. Vienna.
- Göbl, R. 1960b. Roman patterns for Kushāna coins. *JNSI*, Vol. 22, 75-95. Bombay.
- Göbl, R. 1964. Zwei neue Termini für ein zentrales Datum der Alten Geschichte Mittelasiens, das Jahr I des Kušānkönigs Kaniška. *Anzeiger der phil-hist. Klasse der Österreichischen Akademie der Wissenschaften*, Vol. 101, No. 20, 137-151. Vienna.
- Göbl, R. 1967. *Dokumente zur Geschichte der iranischen Hunnen in Baktrien und Indien* Wiesbaden.
- Godard, A. 1928. Les antiquités bouddhiques de Bâmiyân. *MDAFA*, Vol. 2, Paris.
- Golombek, L. 1969a. Abbasid mosque at Balkh. *Oriental Art*, Vol. 15 173-189. London.
- Golombek, L. 1969b. *The Timurid shrine at Gazur Guh*. Toronto. (See also the reviews by Rogers in *Kunst des Orients*, Vol. 7, 1970-1.)
- Goudie, A., Allchin, B. and Hegde, K. T. M. 1973. The former extension of the Great Indian sand desert. *Geographical Journal*, Vol. 139, 243-257. London.
- Gouin, P. 1972. Prospection Archéologique in Tash Qurghan. *Afghanistan*, Vol. 25, No. 4, 75-95. Kabul.
- Grabar, O. 1973. *The Formation of Islamic Art*. New Haven.
- Gray, B. 1961. *Persian Painting*. Geneva.
- Grube, E. 1966. *The World of Islam*. London.
- Grube, E. 1968. Studien zur Malerei der Timuriden, I: Zur Frühstufe von Herat, I *Kunst des Orients*, Vol. 5, 1-23. Wiesbaden.

- Grube, E. 1974. Notes on the decorative art of the Timurid period. *Gururājamanjarikā. Studi in onore di Giuseppe Tucci*, I, 233-279. Naples.
- Gullini, G. 1961. Problemi di archeologia e d'arte dell'Afghanistan preislamico. In: *L'Afghanistan dalla preistoria all'Islam: Capolavori del Museo di Kabul*, 23-57. Turin.
- Habibi, A. H. 1969/70. On the Mode of Efflorescence of the Calligraphic Styles of the Timurid Period As Artistic Manifestations on Buildings and On Books. *Afghanistan*, Vol. 22 No. 3-4, 1-14. Kabul.
- Hackin, J. 1925-26. Sculptures gréco-bouddhiques du Kāpisa. *Monuments Piot*, Vol. 28, 35-44. Paris.
- Hackin, J. 1933. *L'œuvre de la délégation française en Afghanistan, 1922-1923*. Tokio.
- Hackin, J. 1935. Répartition des Monnaies anciennes en Afghanistan. *JA*, Vol. 226, 287-292. Paris.
- Hackin, J. 1936. Recherches archéologiques au col de Khair khane près de Kabul. *MDAFA*, Vol. 7. Paris.
- Hackin, J. 1939. Recherches archéologiques à Begram. *MDAFA*, Vol. 9 (2 vols), Paris.
- Hackin, J. 1954. Nouvelles recherches archéologiques à Begram. *MDAFA*, Vol. 11 (2 vols), Paris.
- Hackin, J. 1959a. Le monastère bouddhique de Fondukistan (Fouilles de J. Carl, 1937). *MDAFA*, Vol. 8, 49-58. Paris.
- Hackin, J. 1959b. Recherches archéologiques à Bâmiyân en 1933. *MDAFA*, Vol. 8, 1-6. Paris.
- Hackin, J. 1959c. Recherches archéologiques dans la partie afghane du Seistan. *MDAFA*, Vol. 8, 23-28. Paris.
- Hackin, J. and Carl, J. 1933. Nouvelles recherches archéologiques à Bâmiyân. *MDAFA*, Vol. 3, Paris.
- Halim, M. A. 1972. Excavations at Sarai Khola, Part II. *Pakistan Archaeology*, Vol. 8, 1-159. Karachi.
- Hallade, M. 1968. *Inde: un millénaire d'art bouddhique. Rencontre de l'Orient et de l'Occident*. Paris. (Translated into English 1968: *The Gandhara Style and the Evolution of Buddhist Art*. London.)
- Hammond, N. 1970. An archaeological reconnaissance in the Helmand Valley, South Afghanistan. *East and West*, Vol. 20, 437-459. Rome. (Reprinted in *Afghanistan*, Vol. 28, No. 4, 74-98, Kabul 1976.)
- Hargreaves, H. 1929. *Excavations in Baluchistan 1925, Sampur Mound, Mastung and Sohr Damb, Nal*. *Memoirs of the Archaeological Survey of India*, Vol. 35, New Delhi.
- Harmatta, J. 1964. The great Bactrian inscription. *AAH*, Vol. 12, 373-471. Budapest.
- Harmatta, J. 1965. Minor Bactrian inscriptions. *AAH*, Vol. 13, 149-205. Budapest.
- Harriss, J. C. 1971. Explanation in prehistory. *Proceedings of the Prehistoric Society*, Vol. 37, 38-55. Cambridge.
- Henning, W. B. 1949. The Aramaic inscription of Aśoka found in Lampāka. *BSOAS*, Vol. 13, 80-88. London.
- Henning, W. B. 1956. Surkh Kotal. *BSOAS*, Vol. 18, 366-7. London.
- Henning, W. B. 1960. The Bactrian inscription. *BSOAS*, Vol. 23, 47-55. London.
- Henning, W. B. 1965. Surkh-Kotal und Kaniska. *ZDMG*, Vol. 115, 75-87. Leipzig.
- Herberg, W. 1976. Topographische Feldarbeiten in Ghor. Bericht über Forschungsarbeiten zum Problem Jam-Feroz Koh. *Afghanistan Journal*, Vol. 3, 57-69. Graz.
- Herrmann, G. 1968. Lapis Lazuli: the early phases of its trade. *Iran*, Vol. 30, 21-57. London.
- Higgs, E. S. and Jarman, M. R. 1972. The origin of animal and plant husbandry. In: *Papers in Economic Prehistory*, ed. E. S. Higgs, 3-13. Cambridge.
- Higgs, E. S. and Jarman, M. R. 1975. Palaeoeconomy. In: *Palaeoeconomy*, Ed. E. S. Higgs, 1-7. Cambridge.
- Hill, D. and Grabar, O. 1967. *Islamic Architecture and its Decoration A.D. 800-1500*. London.
- Hiopina, L. I. 1972. Southern Turkmenia in the Late Bronze Age. *East and West*, Vol. 22, 199-214. Rome.



- Hoernle, A. F. R. 1879. Gold coins from Jalalabad. *PASB*, 1879, 122–138. Calcutta.
- Hole, F. and Flannery, K. V. 1967. The prehistory of southwestern Iran: a preliminary report. *Proceedings of the Prehistoric Society*, Vol. 33, 147–206. Cambridge.
- Hole, F., Flannery, K. V. and Neely, J. 1969. *Prehistory and Human Ecology of the Deh Luran Plain*. Memoirs of the Museum of Anthropology, University of Michigan, No. 1. Ann Arbor.
- Huckriede, R. 1961. Jung-Quater und End-Mesolithikum in der Provinz Kerman (Iran). *Eiszeitalter und Genenwart*, Vol. 12, 25–42. Hannover.
- Humbach, H. 1966. *Baktrische Sprachdenkmäler* 1–2. Wiesbaden.
- Humbach, H. 1967. Two inscriptions in Graeco-Bactrian cursive script from Afghanistan. *East and West*, Vol. 17, 25–26, Rome.
- Humbach, H. 1973. Die Aramäische Aśoka-Inschrift vom Laghman-Fluss. *Indologen—Tagung 1971* ed. H. Härtel and V. Moeller, 161–169, Wiesbaden.
- Hume, G. W. 1976. *The Ladizian/An Industry of the Asian Chopper-Chopping Tool Complex in Iranian Baluchistan*. Philadelphia: Dorrance.
- Humlum, J. 1959. *La Géographie de l'Afghanistan*. Copenhagen.
- Husain Shah, M. 1972–3. A masterpiece of the Timurid art. *Afghanistan*, Vol. 25, No. 4, 22–28. Kabul.
- Hutt, A. 1970. Islamic monuments in Kirman and Khurasan provinces. *Iran*, Vol. 8, 203–205. London.
- Jarman, H. N. 1972. The origins of wheat and barley cultivation. In: *Papers in Economic Prehistory*, Ed. E. S. Higgs, 15–26. Cambridge.
- Jenkins, G. K. 1955. Indo-Scythic Mints. *JNSI*, Vol. 17, Part II, 1–26. Bombay.
- Jones, D., Michell, G. and Martin, G. 1972. Squinches and pendentives, problems and definitions. *Art and Archaeology Research Papers*, Vol. I, 9–25. London.
- Kalb, P. 1973. Rote Glättstreifen-Keramik in Afghanistan. *Archaeologische Mitteilungen aus Iran*, n.s., Vol. 6, 265–71. Berlin.
- Kent, R. 1950. *Old Persian*. New Haven.
- Khan, F. A. 1965. Excavations at Kot Diji. *Pakistan Archaeology*, Vol. 2, 11–85. Karachi.
- Kohzad, A. A. 1953. Along the Koh-i Baba and Hari-Rud. *Afghanistan*, Vol. 8, No. 4, 54–65. Kabul.
- Konow, S. 1929. *Corpus Inscriptionum Indicarum Vol. II Part 1: Kharoshthī Inscriptions*, Calcutta.
- Kruglikova, I. T. 1973. Gorodishche Emshi-tepe v severnom Afghanistan. *Kratkie soobshcheniya Instituta arkheologii Akademii Nauk SSSR*, Vol. 136, 104–113. Moscow.
- Kruglikova, I. T. and Sarianidi, V. I. 1971. La Bactriane ancienne dans l'optique de nouvelles recherches archéologiques. *Kushan Culture and History*, Vol. 2, 9–42. Kabul. (Translation of "Drevnyaya Baktriya v svete novyykh arkheologicheskikh otkrytiy", *Sovetskaya Arkheologiya*, 1971 No. 4, Moscow.)
- Kurz, O. 1954. *Begram et l'occident gréco-romain*. *MDAFA*, Vol. 11, 89–150. Paris.
- Kuwayama, Sh. 1972a. The first excavation at Tapa Skandar. In: *Archaeological Survey of Kyoto University in Afghanistan 1970*, 5–14. ed. S. Kuwayama. Kyoto.
- Kuwayama, Sh. 1972b. Dairiseki-Hindu-zoh-wa Hindu-ohcheh-no monoka? (The Turki Shahis and relevant Brahmanical sculptures in Afghanistan). *Tōhōgakuho*, Vol. 43, Kyoto. (English translation in forthcoming volume of *East and West*, Rome.)
- Kuwayama, Sh. 1973. Problems on recent excavations at Hadda (in Japanese). *Tōhōgakuho*, Vol. 45, Kyoto.
- Kuwayama, Sh. 1974a. Kāpisi Begrām III: renewing its dating. *Orient*, Vol. 10, 57–78. Paris.
- Kuwayama, Sh. 1974b. *Kyoto University Archaeological Survey in Afghanistan 1972*. Kyoto.

- Kuwayama, Sh. and Momono, Sh. 1976. The third excavation at Tapa Skandar. *Japan-Afghanistan Joint Survey in 1974*, 5–15. Kyotot.
- Kuz'mina, E. E. 1974. Baktriya i éllinskiy mir do Aleksandra. In: *Antichnost' i antichnye traditsii v kul'ture i iskusstve narodov Sovetskogo Vostoka. III Vsesoyuznaya Konferentsiya po problemam iskusstva narodov Zakavkas'ya, Sredney Azii, Kazakhstana i vostochnykh respublik RSFSR. Tezisy dokladov*, 18–20. Moscow.
- Lamberg-Karlovsky, C. C. 1970 Excavations at Tepe Yahya, Iran, 1967–1969. Progress Report No. 1. *American School of Prehistoric Research Bulletin* 27. Cambridge, Mass.
- Lamberg-Karlovsky, C. C. 1972a. Trade mechanisms in Indus-Mesopotamia interrelations. *Journal of the American Oriental Society*, Vol. 92, 222–229. New York.
- Lamberg-Karlovsky, C. C. 1972b. Tepe Yahya 1971: Mesopotamia and the Indo-Iranian borderlands. *Iran*, Vol. 10, 89–100. London.
- Lamberg-Karlovsky, C. C. and Tosi, M. 1973. Shahr-i Sokhta and Tepe Yahya: tracks on the earliest history of the Iranian Plateau. *East and West*, Vol. 23, 21–53. Rome.
- Lazarenko, A. A. and Ranov, V. A. 1977. "Karatau I-Drevneyshiy Paleoliticheskiy Pamyatnikh v Lessakh Sredney Azii." (Karatau I-The Oldest Palaeolithic Site in the Loesses of Middle Asia.) *Byulleten' Komissii po Izucheniyu Chetvertichnogo Perioda*. 47: 45–57.
- Le Berre, M. 1970. Le monument de Danestam en Afghanistan. *Revue des Études Islamiques*, Vol. 38, 43–53. Paris.
- Le Berre, M. and Schlumberger, D. 1964. Remparts de Bactres. *MDAFA*, Vol. 19, 61–105. Paris.
- Lees, S. H. and Bates, D. G. 1974. The origins of specialized nomadic pastoralism: a systemic model. *American Antiquity*, Vol. 39, 187–193. Washington.
- Leshnik, L. S. 1967. Kushano-Sasanian ceramics from Central Afghanistan: a preliminary note. *Berliner Jahrbuch Frühgeschichte*, Vol. 7, 311–334. Berlin.
- Leshnik, L. S. 1968. Ghor, Firuzkoh and the Minar-i Jam. *Central Asiatic Journal*, Vol. 12, 36–49. The Hague-Wiesbaden.
- Leshnik, L. S. 1973. Land use and ecological factors in prehistoric North-West India. In: *South Asian Archaeology*, ed. N. Hammond, 67–84. London.
- Le Strange, G. 1905. *Lands of the Eastern Caliphate. Mesopotamia, Persia and Central Asia from the Moslem Conquest to the Time of Timur*. Cambridge (3rd impression, London 1966).
- Lev, D. N. 1967a. Nyekotoriye Itogi Arkheologicheskikh Issledovaniy Samarkandskogo Gosuniversiteta v 1965 godu. *Trudy, Samarkandskogo Gosudarstvennogo Universiteta, A. Navoy*, Vol. 166, 82–99. Samarkand.
- Lev, D. N. 1967b. Paleolit Samarkandskoi Oblasti i yevo Spetsificheskiye Osobennosti. *Trudi, Samarkandskogo Gosudarstvennogo Universiteta, A. Navoy*, Vol. 166, 100–124. Samarkand.
- Lézine, A. 1963–4. Hérat. Notes de voyage. *Bulletin d'Études Orientales*, Vol. 18, 127–145. Damascus.
- Lézine, A. 1964. Trois stupa de la region de Caboul. *Artibus Asiae*, Vol. 27, 5–24. Ascona.
- Litvinskiy, B. A. and Zeymal, T. I. 1971a. Adzhina Tepe. *Arkitektura, zhivopis', skul'ptura*, Moscow.
- Litvinskiy, B. A. and Zeymal, T. I. 1971b. Adzhina Tepe. *Kushan Culture and History*, Vol. 2, 83–100. Kabul.
- Longworth-Dames, M., Ghirshman, R. and Gibb, H. A. R. 1960. *Afghanistan*. In: *Encyclopaedia of Islam*, new edn. Vol. 1, 221–233. Leiden/London.
- McBurney, C. B. M. 1964. Preliminary report on Stone Age reconnaissance in northeastern Iran. *Proceedings of the Prehistoric Society*, Vol. 30, 382–399. Cambridge.
- McBurney, C. B. M. 1968. The cave of Ali Tappeh and the Epi-Palaeolithic in northeastern Iran. *Proceedings of the Prehistoric Society*, Vol. 34, 385–413. Cambridge.

- McBurney, C. B. M. 1972. Report of an archaeological survey in northern Afghanistan, July–August 1971. *Afghanistan*, Vol. 25, No. 3, 22–32. Kabul.
- McBurney, C. B. M. 1975. *Early man in the Soviet Union: the implications of recent discoveries*. London.
- Mac Dowall, D. W. 1960. The weight standards of the gold and copper coinages of the Kushāna dynasty from Vima Kadphises to Vāsudeva. *JNSI*, Vol. 22, 63–74. Bombay.
- Mac Dowall, D. W. 1965. The dynasty of the later Indo-Parthians. *NC*, 7th Series, Vol. 5, 137–148. London.
- Mac Dowall, D. W. 1968a. The Shahis of Kabul and Gandhara. *NC*, 7th Series, Vol. 8, 189–224. London.
- Mac Dowall, D. W. 1968b. Numismatic evidence for the date of Kanishka. *Papers on the Date of Kanishka* (ed. A. L. Basham) 134–149. Leiden.
- Mac Dowall, D. W. 1968c. Soter Megas, the King of Kings, the Kushāna. *JNSI*, Vol. 30, 28–48. Bombay.
- Mac Dowall, D. W. 1973. The Azes Hoard from Shaikhan Dheri, Fresh evidence for the context of Jihonika the Satrap. *South Asian Archaeology* ed. N. Hammond, 215–230. London.
- Mac Dowall, D. W. 1975. The role of Mithra among the deities of the Kusana coinage. *Mithraic Studies* ed. J. R. Hinnels, 142–150. Manchester.
- Mainstone, R. J. 1973. Squinches and pendentives, comments on problems of definitions. *Art and Archaeology Research Papers*, Vol. 4, 131–137. London.
- Mandel'shtam, A. M. 1966. Kochevniki na puti v Indiyu. *Trudy Tadzhikskoy arkheologicheskoy ekspeditsii, V (Materialy i issledovaniya po arkheologii SSSR, 136)*. Moscow-Leningrad.
- Mandel'shtam, A. M. 1975. Pamyatniki kochevnikov kushanskogo vremeni v Severnoy Baktrii. *Trudy Tadzhikskoy arkheologicheskoy ekspeditsii, I/II*. Leningrad.
- Maricq, A. 1958. Inscriptions de Surkh Kotal (Baghlān). La grande inscription de kaniška et l'étoctokharien, l'ancienne langue de la Bactriane, Vol. 246, 345–440. Paris.
- Maricq, A. and Wiet, G. 1959. Le minaret de Djam. La découverte de la capitale des sultans ghorides (XII–XIII siècles). *MDAFA*, Vol. 16. Paris.
- Marshack, A. 1974. Aq Kupruk: art and symbol. *Afghanistan*, Vol. 27, No. 3, 20–32. Kabul.
- Marshall, J. 1951. *Taxila* (3 vols), Cambridge.
- Masson, C. 1834. Memoir on the ancient coins found at Beghram in the Kohistán of Kábul. *JASB*, Vol. 3, 152–175. Calcutta.
- Masson, C. 1836a. Second memoir on the ancient coins found at Beghram, in the Kohistán of Kábul. *JASB*, Vol. 5, 1–28. Calcutta.
- Masson, C. 1836b. Third Memoir on the ancient coins discovered at the site called Beghram in the Kohistan of Kabul. *JASB*, Vol. 5, 537–547. Calcutta.
- Masson, C. 1836c. Note on an inscription at Bamian. *JASB*, Vol. 5, 188. Calcutta.
- Masson, C. 1836d. Notes on the antiquities of Bamian. *JASB*, Vol. 5, 707–720. Calcutta.
- Masson, M. E. and Pugachenkova, G. A. 1956–59. Parfyanskíe ritony Nisy. *Trudy yuzhnoy Turkmenistanskoy arkheologicheskoy kompleksnoy ekspeditsii IV*. Text, Ashkabad 1959; plates, Moscow 1956.
- Masson, V. M. and V. A. Romodin 1964. *Istoriya Afganistana*, Vol. I, Moscow.
- Masson, V. M. and Sarianidi, V. I. 1972. *Central Asia: Turkmenia before the Achaemenids*. London.
- Meadow, R. H. 1973. A chronology for the Indo-Iranian borderlands and southern Baluchistan 4000–2000 B.C. In: *Radiocarbon and Indian archaeology*, ed. D. P. Agrawal and A. Ghosh, 190–204. Bombay.
- Melikian-Chirvani, A. S. 1968. Remarques préliminaires sur un mausolée ghaznévide. *Arts Asiatiques*, Vol. 17, 59–92. Paris.

- Melikian-Chirvani, A. S. 1969a. La plus ancienne mosquée de Balkh. *Arts Asiatiques*, Vol. 20, 3–20. Paris.
- Melikian-Chirvani, A. S. 1969b. Un bassin iranien de l'an 1375. *Gazette des beaux arts*, Vol. 73, 5–18. Paris.
- Melikian-Chirvani, A. S. 1970. Eastern Iranian architecture: apropos of the Ghurid parts of the Great Mosque of Harat. *BSOAS*, Vol. 33, 322–327. London.
- Melikian-Chirvani, A. S. 1974 L'évocation littéraire du bouddhisme dans l'Iran musulman. *Le monde iranien et l'islam* 2.
- Meunié, J. 1942. Shotorak. *MDAFA*, Vol. 10. Paris.
- Meunié, J. 1959a. Begram—Fouille de 1938. *MDAFA*, Vol. 8, 103–106. Paris.
- Meunié, J. 1959b. Une entrée de la ville à Begram. *MDAFA*, Vol. 8, 107–113. Paris.
- Michel, A. 1959. *The Kabul, Kunduz and Helmand Valleys and the National Economy of Afghanistan: A Study of Regional Resources and the Comparative Advantages of Development* Foreign Field Research Program, Office of Naval Research, Report No. 5, National Academy of Sciences, Washington, D.C.
- Minorsky, V. 1937. *Hudūd al-Ālam*, "The Regions of the World", a Persian geography. London.
- Miyaji, A. 1976. Wall paintings of Bamiyan: a stylistic analysis. *Japan-Afghanistan Joint Archaeological Survey in 1974*, 17–31. Kyoto.
- Mizuno, S. (ed.) 1962. *Haibāk and Kashmir Smast*. Kyoto.
- Mizuno, S. (ed.) 1967. *Hazār Sum and Fīl-Khāna*. Cave Sites in Afghanistan Surveyed in 1962. Kyoto.
- Mizuno, S. (ed.) 1968. *Durman Tepe and Lalma*. Buddhist Sites in Afghanistan Surveyed in 1963–1965. Kyoto.
- Mizuno, S. (ed.) 1970. *Chaqalaq Tepe, fortified Village in North Afghanistan Excavated in 1964–1967*. Kyoto.
- Mizuno, S. (ed.) 1971. *Basawal and Jalalabad-Kabul*. Buddhist Cave-temples and Topes in South-east Afghanistan Surveyed Mainly in 1965. Kyoto.
- Moline, J. 1975. The Minaret of Gām (Afghanistan). *Kunst des Orients*, Vol. 9, 131–148. Wiesbaden.
- Moline, J. 1978. On the dating of some minarets in Iran. *aarp* 13.
- Movius, H. L., Jr. 1953. Palaeolithic and Mesolithic Sites in Soviet Central Asia. *Proceedings of the American Philosophical Society*, Vol. 97, 383–421. Philadelphia.
- Mughal, M. R. 1970. *The early Harappan period in the greater Indus Valley and northern Baluchistan (c. 3000–2400 B.C.)* Ph.D. dissertation, Dept of Anthropology, University of Pennsylvania. Philadelphia.
- Mughal, M. R. 1972a. Introduction to the pottery of periods I and II at Sarai Khola. *Pakistan Archaeology*, Vol. 8, 34–76. Karachi.
- Mughal, M. R. 1972b. A summary of excavations and explorations in Pakistan (1971 and 1972). *Pakistan Archaeology*, Vol. 8, 114–158. Karachi.
- Mughal, M. R. 1973. *Present State of Research on the Indus Valley civilisation*. Dept of Archaeology and Museums, Government of Pakistan. Karachi.
- Mughal, M. R. 1974a. Explorations in northern Baluchistan, 1972: new evidence and fresh interpretations. In: *Proceedings of the II<sup>nd</sup> Annual Symposium on Archaeological Research in Iran*, 276–286. Teheran.
- Mughal, M. R. 1974b. New evidence of the early Harappan culture from Jalilpur, Pakistan *Archaeology*, Vol. 27, 106–113. New York.
- Mustamandi, S. 1971. Preliminary report on Haddā's fifth excavation period. *Kushan Culture and History*, Vol. 2, 43–50. Kabul. (Also published in *Afghanistan*, Vol. 24, Nos. 2–3, 128–137, Kabul 1971.)



- Mustamandi, S. 1973. Preliminary report of the sixth and seventh excavation expeditions in Tapa-Shutur, Hadda. *Afghanistan*, Vol. 26, No. 1, 52–62. Kabul.
- Mustamandi, S. 1974. The Herakle of Hadda. *Afghanistan*, Vol. 26, No. 4, 75–77. Kabul.
- Mustamandi, S. and Mustamandi, M. 1968. The excavation of the Afghan Archaeological Mission in Kapisa. *Afghanistan*, Vol. 20, No. 4, 67–79. Kabul.
- Mustamandi, S. and Mustamandi, M. 1969. Nouvelles fouilles à Hadda (1966–1967) par l'Institut Afghan d'Archéologie. *Arts Asiatiques*, Vol. 19, 15–36. Paris.
- Narain, A. K. 1957. *The Indo-Greeks*. Oxford.
- Niedermayer, O. von, and Diez, E. 1924. *Afghanistan*. Leipzig.
- Nikonov, A. A. and Ranov, V. A. 1971. K Kharakteristike Srednye-Verknye-Pleistosenovikh Otlozhenii r. Yaksoy v svetle Novikh Dannikh. *Doklady Akademii Nauk Tadzhikskoy SSR*, Vol. 14, No. 12, 44–47. Dushanbe.
- Oakley, K. P. 1966. *Frameworks for Dating Fossil Man*. London.
- Otto-Dorn, K. 1964. *Kunst des Islam*. Baden-Baden.
- Pal, P. 1973. Bronzes of Kashmir: their sources and influences. *Journal of the Royal Society of Arts*, Vol. 121, 726–749. London.
- Pal, P. 1973–4. A Brāhmanical triad from Kashmir and some related icons. *Archives of Asian Art*, Vol. 27, 33–45. New York.
- Pal, P. 1975. *Bronzes of Kashmir*. Graz.
- Perkins, D., Jr. 1964. Prehistoric fauna from Shanidaï Iraq. *Science*, Vol. 144, 1565–1566. Washington.
- Perkins, D., Jr. 1972. The fauna of the Aq Kupruk caves: a brief note. In: *Prehistoric Research in Afghanistan (1959–1966)*, ed. L. Dupree, 73. Transactions of the American Philosophical Society, Vol. 62 Pt. 4. Philadelphia.
- Petitot-Bichler, C. Y. 1975. Trésor de monnaies Grecques et Gréco-Bactriennes trouvé a Aï Khānoum (Afghanistan). *Revue Numismatique*, 58–69. Paris.
- Pidaev, Sh. R. 1974. Materialy k izucheniyu drevnikh pamyatnikov Severnoy Baktrii. In: *Drevnayaya Baktriya: Predvaritel'nye soobshcheniya ob arkheologicheskikh rabotakh na yuge Uzbekistana*, 32–42. Leningrad.
- Piggott, S. 1947. A new prehistoric ceramic from Baluchistan. *Ancient India*, Vol. 3, 131–142. Delhi.
- Piggott, S. 1950. *Prehistoric India*. Harmondsworth.
- Piperno, M. 1973. Micro-drilling at Shahr-i Sokhta: the making and use of the lithic drill-heads In: *South Asian Archaeology*, ed. N. Hammond, 119–129. London.
- Piperno, M., and M. Tosi 1975. The graveyard of Shahr-i Sokhta. *Archaeology*, Vol. 28, 186–197. New York.
- Pope, A. U. 1938–39. *A Survey of Persian Art from Prehistoric Times to the Present*. London.
- Pradel, L. 1966. Transition from mousterian to perigordian: skeletal and industrial. *Current Anthropology*, Vol. 7, 33–50. Chicago.
- Pugachenkova, G. A. 1958. Puti razvitiya arkhetekturu Yuzhnogo Turkmenistana pory rabovladieniya i feodalizma. *Trudy Yuzhno-Turkmenistanskoy arkheologicheskoy kompleksnoy Ekspeditsii*. vol. 6. Moscow.
- Pugachenkova, G. A. 1963. *Iskusstvo Afghanistana. Tri etyuda*. Moscow.
- Pugachenkova, G. A. 1965. La sculpture de Khalchayan. *Iranica Antiqua*, Vol. 5, 116–127. Leiden.
- Pugachenkova, G. A. 1966. *Halchajan*. Tashkent.
- Pugachenkova, G. A. 1967. The stratigraphy of new coin finds from Northern Bactria *Vestnik Drevney Istorii*, Vol. 101, 74–88. Moscow.

- Pugachenkova, G. A. 1968. Les monuments peu connus de l'architecture médiévale de l'Afghanistan. *Afghanistan*, Vol. 21, No. 1, 17–52. Kabul.
- Pugachenkova, G. A. 1969. Baktriyskiy i parfyanskiy vklad v formirovanie gandharskoy shkoly. In: *Iskusstvo Indii-Sbornik statey*, 47–74. Moscow.
- Pugachenkova, G. A. 1970–71. A L'Étude Des Monuments Timorides De 'Afghanistan *Afghanistan*, Vol. 23, No. 3, 24–49. Kabul.
- Pugachenkova, G. A. 1971a. More on the studies of the Kushan monuments in southern Uzbekistan. *Kushan Culture and History*, Vol. 2, 74–82. Kabul.
- Pugachenkova, G. A. 1971b. Novoe v izuchenii Dal'verzin-tepe (K istorii baktriysko-kushanskoy gorodskoy kul'tury). *Sovetskaya Arkheologiya*, 1971, No. 4, 186–203. Moscow.
- Pugachenkova, G. A. 1974. O kul'takh Baktrii v svete arkheologii. *Vestnik drevney istorii*, Vol. 127, 124–135. Moscow.
- Pugachenkova, G. A. 1978. Little unknown monuments of the Balkh area. *aarp* 13.
- Puglisi, S. M. 1963. Preliminary report on the researches at Hazar Sum (Samangan) *East and West*, Vol. 14, 3–12. Rome.
- Rahman, A. 1969. Excavations at Damkot. *Ancient Pakistan*, Vol. 4, 103–250. Peshawar.
- Raikes, R. L. 1967. *Water, Weather and Prehistory*. London.
- Raikes, R. L. and Dyson, R. H. 1961. The prehistoric climate of Baluchistan and the Indus Valley. *American Anthropologist*, Vol. 63, 265–281. Menasha.
- Ralph, E. K., Michael, H. N. and Han, M. C. 1973. Radiocarbon dates and reality. *MASCA Newsletter*, Vol. 9, No. 1, 1–20. Philadelphia.
- Rapson, E. J. 1904a. Note on ancient coins collected in Seistan by Mr G. P. Tate of the Seistan boundary commission. *JRAS*, 1904, 673–680. London.
- Rapson, E. J. 1904b. Ancient silver coins from Baluchistan. *NC*, 4th series, Vol. 4, 311–325. London.
- Renfrew, C. 1972. *The Emergence of Civilisation: the Cyclades and the Aegean in the Third Millennium B.C.* London.
- Roaf, M. and Stronach, D. 1973. Tepe Nush-i Jan, 1970: second interim report. *Iran*, Vol. 11, 129–140. London.
- Robert, L. 1968. De Delphes à l'Oxus, inscriptions grecques nouvelles de la Bactriane. *CRAI*, 1968, 416–67, Paris.
- Rogers, M. 1973. The 11th century—a turning point in the architecture of the Mashriq? In: *Islamic Civilisation 950–1150*, ed. D. S. Richards, 211–249. Oxford.
- Rosenfield, J. M. 1967. *The Dynastic Arts of the Kushans*. Berkeley and Los Angeles, 1967.
- Ross, E. J. 1946. A chalcolithic site in northern Baluchistan. *Journal of Near Eastern Studies*, Vol. 5, 291–315. Chicago.
- Rowland, B. 1961. The bejewelled Buddha in Afghanistan. *Artibus Asiae*, Vol. 24, 20–24. Ascona.
- Rowland, B. 1966. *Ancient art from Afghanistan*. New York.
- Rowland, B. 1970. *Zentralasien*. Baden-Baden. (Translated in French: 1974 *Asie Centrale*. Paris.)
- Rowland, B. and Coomaraswamy, A. K. 1938. *The wall-paintings of India, Central Asia and Ceylon*. Boston.
- Saljoqi, F. 1973. The grave stone of Gawhar Shad. *Afghanistan*, Vol. 25, No. 4, 29–31. Kabul.
- Sarianidi, V. I. 1971a. North Afghanistan in the Bronze Period. *Afghanistan*, Vol. 24, Nos 2–3, 26–38. Kabul.
- Sarianidi, V. I. 1971b. Southern Turkmenia and northern Iran. Ties and differences in very ancient times. *East and West*, Vol. 21, 291–310. Rome.
- Sarianidi, V. I. 1972. *Raskopki Tillja-tepe v Severnom Afganistane*, I. Moscow.

- Sarianidi, V. I. 1974. Baktriya v epokhu bronzii. *Sovetskaya Arkheologiya*, 1974, No. 4, 49–71. Moscow.
- Sarianidi, V. I. 1975. *Afganistan v epokhu bronzii i rannego zheleza*, Moscow.
- Scarcia, G. and Taddei, M. 1973. The Masġid-i Sangī of Larvand. *East and West*, Vol. 23, 89–108. Rome.
- Scerrato, U. 1958. Notizie sull' editto bilingue greco-aramaico di Aśoka scoperto in Afghanistan. *Archeologia Classica*, Vol. 10, 262–266. Rome.
- Scerrato, U. 1959. The first two excavation campaigns at Ghazni, 1957–1958. *East and West*, Vol. 10, 23–56. Rome.
- Scerrato, U. 1960. A short note on some recently discovered Buddhist grottoes near Bamiyan, Afghanistan. *East and West*, Vol. 11, 94–120. Rome.
- Scerrato, U. 1962. Islamic glazed tiles with molded decoration from Ghazni. *East and West*, Vol. 13, 263–287. Rome.
- Scerrato, U. 1964. *Introduction to Scerrato et al.*, 1964.
- Scerrato, U. 1966. Excavations at Dahan-i Ghulaman (Seistan-Iran). First preliminary report (1962–1963). *East and West*, Vol. 16, 9–30. Rome.
- Scerrato, U. 1967. A note on some pre-Muslim antiquities of Ġagatū. *East and West*, Vol. 17, 11–24. Rome.
- Scerrato, U. 1974. A proposito dello 'Airyana Vaējah'. Notizie sulle possibilità di allevamento del bovino nella Drangiana come attività autonoma. In: *Gururājamañjarikā. Studi in onore di Giuseppe Tucci*, I, 101–112. Naples.
- Scerrato, U., Pugliese Carratelli, G. and Garbini, G. 1964. *A Bilingual Graeco-Aramaic Edict by Aśoka*. Rome.
- Schimmel, A. 1970. *Islamic Calligraphy*. Leiden.
- Schippman, K. 1971. Die iranischen Feuerheiligtümer. In: *Religionsgeschichtliche Versuche und Vorarbeiten*, Vol. 31. Berlin-New York.
- Schlumberger, D. 1947. Communication au séance du 14 Mars 1947. *CRAI*, 1947, 241–243. Paris.
- Schlumberger, D. 1952a. Le temple de Surkh Kotal en Bactriane, I. *JA*, Vol. 240, 433–453. Paris.
- Schlumberger, D. 1952b. Le palais ghaznévide de Lashkari Bazar. *Syria*, Vol. 29, 251–270. Paris.
- Schlumberger, D. 1953. L'argent grec dans l'empire achéménide. *MDAFA*, Vol. 14, 1–64. Paris.
- Schlumberger, D. 1954. Le temple de Surkh Kotal en Bactriane, II. *JA*, Vol. 242, 161–187. Paris.
- Schlumberger, D. 1955. Le temple de Surkh Kotal en Bactriane, III. *JA*, Vol. 243, 269–279. Paris.
- Schlumberger, D. 1960. Descendants non-méditerranéens de l'art grec. *Syria*, Vol. 37, 131–166 and 254–318. Paris.
- Schlumberger, D. 1961. The excavations at Surkh Kotal and the problem of Hellenism in Bactria and India. *Proceedings of the British Academy*, Vol. 47, 77–95. London.
- Schlumberger, D. 1964a. Une nouvelle inscription grecque d'Aśoka. *CRAI*, 1964, 126–140. Paris.
- Schlumberger, D. 1964b. Le temple de Surkh Kotal en Bactriane, IV. *JA*, Vol. 252, 303–326. Paris.
- Schlumberger, D. 1970. *L'Orient hellénisé*. Paris.
- Schlumberger, D., Robert, L., Dupont-Sommer, A. and Benveniste, E. 1958. Une Bilingue gréco-araméenne d'Aśoka. *JA*, Vol. 246, 1–48. Paris.
- Schlumberger, D. et al., 1978. Lashkari Bazar. Une résidence royale ghaznévide et ghoride. I A, *L'architecture*. Paris.
- Service, E. R. 1975. *Origins of the State and Civilisation: the Process of Cultural Evolution*. New York.
- Shaffer, J. G. 1971. Preliminary field report on excavations at Said Qala Tepe Afghanistan, Vol. 24, Nos 2–3, 89–127. Kabul.
- Shaffer, J. G. 1972. *Prehistoric Baluchistan: A Systematic Approach*. Ph.D. dissertation, Dept of Anthropology, University of Wisconsin. Madison.

- Shaffer, J. G. 1974a. *Allahdino and the mature Harappan: a preliminary report on the cultural stratigraphy*. Dept of Anthropology, Case Western Reserve University. Cleveland.
- Shaffer, J. G. 1974b. The prehistory of Baluchistan: some interpretative problems. *Arctic Anthropology*, Vol. 11, supplement, 224–235. Madison.
- Shaffer, J. G. n.d. *Pastoral Nomads in Prehistory*. Unpublished MS.
- Shaffer, J. G. and Hoffman, M. A. 1971. The Kushano-Sasanian cemetery (of Said Qala Tepe). *Afghanistan*, Vol. 24, Nos. 2–3, 138–166. Kabul. (Amended reprint forthcoming in *East and West*, Rome.)
- Shakur, M. A. 1946. *A Hand Book to the Inscriptions Gallery in the Peshawar Museum*. Peshawar.
- Sharif, M. 1969. Excavations at Bhir Mound, Taxila. *Pakistan Archaeology*, Vol. 6, 6–99. Karachi.
- Shephard Parpagliolo, M. T. 1972. *Kābul—the Bāgh-i Bābur*. Rome.
- Simpson, W. 1879. Coins from the Ahin Posh Tope near Jelalabad. *PASB*, 1879, 77–79. Calcutta.
- Sims, E. G. 1974. The Timurid imperial style: its origins and diffusion. *Art and Archaeology Research Papers*, Vol. 6, 56–67. London.
- Sircar, D. C. 1963. Three early mediaeval inscriptions: (1) Kabul Inscription of Shāhi Khingāla. *Epigraphia Indica*. Vol. 35, Pt. I, 44–46. Calcutta.
- Smith, B. J. 1975. *Slope development on the limestone hamadas of the north west Sahara*. Ph.D. dissertation, Dept of Geography, University of Reading, England.
- Smith, H. H., Bernier, D. W., Bunge, F. M., Rintz, F. C., Shinn, R. S. and Teleki, S. 1969. *Area Handbook for Afghanistan—1969*. DA Pam No. 550–65. U.S. Government Printing Office. Washington.
- Smith, P. E. L. and Young, T. C., Jr., 1972. The evolution of early agriculture and culture in Greater Mesopotamia: a trial model. In: *Population Growth: Anthropological Implications*, ed. B. Spooner, 1–59. Boston.
- Smith, V. A. 1906. *Catalogue of the Coins in the Indian Museum, Calcutta* Vol. 1, Oxford.
- Solecki, R. 1963. Prehistory in Shanidar Valley, Northern Iraq. *Science*, Vol. 139, 179–193. Washington.
- Soper, A. C. 1949–50. Aspects of light symbolism in Gandharan sculpture. *Artibus Asiae*, Vol. 12, 252–283 and 314–330; Vol. 13, 63–85. Ascona.
- Sourdél, D. and Sourdél, J. 1968. *La civilisation de l'Islam classique*. Paris.
- Sourdél-Thomine, J. 1953. Deux minarets d'époque Seljoukide en Afghanistan. *Syria*, Vol. 30, 108–136. Paris.
- Sourdél-Thomine, J. 1956. Stèles arabes de Bust (Afghanistan). *Arabica*, Vol. 3, 285–306. Leiden.
- Sourdél-Thomine, J. 1960. L'art gūride de l'Afghanistan, à propos d'un livre récent. *Arabica*, Vol. 7, 273–280. Leiden.
- Sourdél-Thomine, J. 1978. Le décor non figuratif et les inscriptions. *Lashkari Bazar*, 1 B. Paris.
- Sourdél-Thomine, and Spuler, B. 1973. Die Kunst des Islam. *Propyläen-Kunstgeschichte*, Vol. 4. Berlin.
- Spooner, B. 1973. *The Cultural Ecology of Pastoral Nomads*. Addison-Wesley Module in Anthropology No. 45. wing, Mass.
- Stacul, G. 1966. Preliminary report on the pre-Buddhist Necropolises in Swat (W. Pakistan). *East and West*, N.S. Vol. 16, 37–79. Rome.
- Stacul, G. 1969. Excavations near Ghāligai (1968) and chronological sequence of protohistoric cultures in the Swāt Valley, (W. Pakistan). *East and West*, Vol. 19, 44–91. Rome.
- Stacul, G. 1971. Cremation Graves in northwest Pakistan and their Eurasian connections: remarks and hypotheses *East and West*, N.S. Vol. 21, 9–19. Rome.
- Staviskiy, B. Ja. (ed.) 1972. *Buddiyskiy kul'tovyy tsentr Kara-tepe v Starom Termeze: Osnovnye itogi rabot 1965–1971 gg.* Moscow.



- Stein, Sir M. A. 1928. *Innermost Asia: Detailed Report of Explorations in Central Asia, Kan-Su and Eastern Iran*. London.
- Stern, P. 1954. Les ivoires et os découverts à Begram: leur place dans l'évolution de l'art de l'Inde. *MDAFA*, Vol. 11, 17–57. Paris.
- Stern, S. M. 1969. A manuscript from the library of the Ghaznawid Amīr 'Abd al-Rashīd In: *Paintings from Islamic lands*, ed. R. Pinder-Wilson, 7–31. Oxford.
- Taddei, M. 1968. Tapa Sardār. First preliminary report. *East and West*, Vol. 18, 109–124. Rome.
- Taddei, M. 1970. Inscribed clay tablets and miniature stūpas from Ghaznī. *East and West*, Vol. 20, 70–86. Rome.
- Taddei, M. 1972a. Problemi di storia dell'arte e ricerca archeologica in Afghanistan. *Il Veltro*, Vol. 16, 549–561. Rome.
- Taddei, M. 1972b. IsMEO Activities: Archaeological Mission in Afghanistan. *East and West*, Vol. 22, 379–384. Rome.
- Taddei, M. 1973a. The Mahisamardini image from Tapa Sardar, Ghazni, Afghanistan. In: *South Asian Archaeology* ed. N. Hammond, 203–213. London.
- Taddei, M. 1973b. Una Kaumodakī-gadā di arte Śāhi nella raccolta dell'Istituto Universitario Orientale di Napoli. *Arte Orientale in Italia*, Vol. 3, 61–71. Rome.
- Taddei, M. 1974a. Appunti sull'iconografia di alcune manifestazioni luminose dei Buddha In: *Gururājamañjarikā. Studi in onore di Giuseppe Tucci*, II, 435–449. Naples.
- Taddei, M. 1974b. A note on the Parinirvāna Buddha at Tapa Sardār (Ghazni, Afghanistan). In: *South Asian Archaeology*, 1973 ed. J. van Lohuisen-de Leeuw and J. M. M. Ubaghs, 111–115. Leiden.
- Tapper, R. 1974. Nomadism in modern Afghanistan: Asset or anachronism? In: *Afghanistan in the 1970s*, eds Dupree, L. and Albert, L., 126–143. New York.
- Tarn, W. W. 1951. *The Greeks in Bactria and India*. (2nd edn).
- Tate, G. P. 1912. *Seistan. A Memoir on the History, Topography, Ruins and People of the Country*. Calcutta.
- Tosi, M. 1969. Excavations at Shahr-i Sokhta. Preliminary report on the second campaign, September–December 1968. *East and West*, Vol. 19, 283–386. Rome.
- Tosi, M. 1973. Early urban revolution and settlement patterns in the Indo–Iranian borderlands. In: *The Explanation of Culture Change: Models in Prehistory*, ed. C. Renfrew, 429–446. London.
- Tosi, M. and Wardak, R. 1972. The Fullol hoard: a new find from Bronze Age Afghanistan. *East and West*, Vol. 22, 9–17. Rome.
- Trousdale, W. 1973. *The Helmand-Sistan Project in South Western Afghanistan* Paper presented at 29 Congrès International des Orientalistes, Paris.
- Troxell, H. A. and Spengler, W. F. 1969. A hoard of early Greek coins from Afghanistan. *American Numismatic Society Museum Notes*, Vol. 15, 1–19; New York.
- Tucci, G. 1958. Footnote 29 to "Preliminary report on an archaeological survey in Swat". *East and West*, Vol. 9, 327–328. Rome.
- Tucci, G. 1963. The tombs of the Asvakayana-Assakenoi. *East and West*, N. S. Vol. 14, 27–31. Rome.
- Van Lohuizen de Leeuw, J. E. 1950. *The "Scythian" Period*. Leiden.
- Van Lohuizen-de Leeuw, J. E. 1959. An ancient Hindu temple in eastern Afghanistan. *Oriental Art*, n.s. Vol. 5, 61–69. London.
- Vavilov, N. J. 1951. The origin, variation, immunity and breeding of cultivated plants. Selected writings translated from the Russian. (Trans. by K. S. Chester.). *Chronica Botanica*, Vol. 13, i–vi. Waltham, Mass.
- Vavilov, N. and Bukinich, D. 1929 *Zemledel'cheskiy Afghanistan*. Supplement 33 of *Bulletin of Applied Botany, Genetics and Plant Breeding*. Leningrad.

- Verardi, G. 1977. Buddhist cave complex at Homay Qala In: *South Asian Archaeology*, ed. J. van Lohuizen de Leeuw.
- Vercellin, G. 1976. The identification of Firuzkuh: a conclusive proof. *East and West* 26.
- Vita-Finzi, C. 1969. Late Quaternary alluvial chronology of Iran. *Geologische Rundschau*, Vol. 58, 951–973. Leipzig.
- Vogel, J. P. 1911. Antiquities of Chamba State. *Memoirs of the Archaeological Survey of India*, Vol. 36, Calcutta.
- Von Wissman, H., Poech, H., Smolla, G. and Kussmaul, F. 1956. On the role of nature and man in changing the face of the dry belt of Asia. In: *Man's Role in Changing the Face of the Earth*, ed. W. L. Thomas. 278–303. Chicago.
- Vorob'eva, M. G. 1959. Keramika Khorezma antichnogo perioda. In: *Keramika Khorezma, Trudy Khorezmskoy arkheologo-etnograficheskoy ekspeditsii IV*, 63–220. Moscow.
- Ward-Perkins, J. B. 1965. The Roman West and the Parthian East. *Proceedings of the British Academy*, Vol. 51, 175–199. London.
- Walters, T. 1904–05 *On Yuan Chwang's Travels in India*. 2 vols. London.
- Wheeler, Sir M. 1955. *Rome Beyond the Imperial Frontiers*. London.
- Wheeler, Sir M. 1962. *Chārsada. A Metropolis of the North-West Frontier*. London.
- Wheeler, Sir M. 1968. *The Indus Civilisation* (3rd edn). Cambridge.
- Wheatley, P. 1972. The concept of urbanism. In: *Man, Settlement and Urbanism*, ed. P. J. Ucko, R. Tringham and G. W. Dimbleby, 601–637. London.
- Whitehead, R. B. 1923. Notes on Indo-Greek numismatics. *NC*, 5th Series, Vol. 3, 294–343. London.
- Whyte, R. O. 1961. Evolution of land use in South-Western Asia. In: *A History of Land Use in Arid Regions*, ed. L. D. Stamp, 57–113. UNESCO, Paris.
- Wilber, D. N. 1955. *The Architecture of Islamic Iran. The Il-Khānīd Period*. Princeton, N.J.
- Wilkinson, J. V. S. and Binyon, L. 1931. *The Shah-namah of Firdaus, with 24 Illustrations from a 15th-century Persian Ms. in the Possession of the Royal Asiatic Society*. Oxford.
- Wilson, H. H. 1841. *Ariana Antiqua. A Descriptive Account of the Antiquities and Coins of Afghanistan; with a Memoir on the Buildings called Topes*, by C. Masson. London. (Reprinted Delhi, 1971.)
- Wolfe, N. H. 1966. *Herat. A Pictorial Guide*. Kabul.
- Wright, G. A. 1971. Origins of food production in southwest Asia: a survey of ideas. *Current Anthropology*, Vol. 12, 447–477. Chicago.
- Wright, H. E., Jr. 1961. Pleistocene glaciation in Kurdistan. *Eiszeitalter und Gegenwart*, Vol. 12, 131–164. Hannover.
- Wright, H. E., Jr. 1968. Natural environment of early food production north of Mesopotamia. *Science*, Vol. 161, 345–347. Washington.
- Yamada, M. 1972. Skandar inscription of the Umā Maheśvara image. In: *Archaeological Survey of Kyoto University in Afghanistan 1970*, 15–22. Kyoto.
- Yate, C. E. 1887. Notes on the city of Herat. *JASB*, Vol. 56, 84–106. Calcutta.
- Young, R. S. 1955. The south wall of Balkh-Bactra. *American Journal of Archaeology*, Vol. 59, 267–276. New York.
- Young, T. 1967. The Iranian migration into the Zagros. *Iran*, Vol. 5, 11–34. London.
- Zeymal, E. V. 1974. Nachalnaya Data Kaneshke—278 n.e. *Central Asia in the Kushan Period* Volume I, 292–301. Moscow.



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